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# Understanding Nimbyism as Local Preservationism

**Martin Vinæs Larsen**[1] *Aarhus University*

**Niels Nyholt** *Aarhus University*

**Abstract:** Responding to important societal challenges often requires physical changes in local communities. Yet such changes frequently encounter strong "not-in-my-backyard" (nimby) opposition. Existing research typically attributes nimbyism to homeowners' efforts to protect property values or to exclude low-income residents and racial minorities. We argue instead that nimbyism is better explained by a widespread desire to preserve the physical character of one's neighborhood. To explore this argument, we conduct a large-scale vignette survey experiment in which respondents evaluate a hypothetical project placed on a personalized map of their neighborhood. Our analyses reveal that most residents have strong feelings about the appearance of their local area, and those without such attachments exhibit significantly less nimby opposition. We also find that citizens express less nimby opposition towards housing projects that fit in with the surrounding built environment. By contrast, we find limited evidence for explanations rooted in concerns about property values or social exclusion.

Addressing important societal challenges, such as the transition to a zero-carbon economy or the housing affordability crisis, requires substantial physical transformations of local communities. This includes the construction of new dense housing (Glaeser 2011) as well as new energy and transportation infrastructure (Sarkodie, Owusu, and Leirvik 2020). Yet projects like these are often blocked by local not-in-my-backyard (nimby) opposition (Einstein, Glick, and Palmer 2019). Understanding what drives this pervasive force in local politics is a crucial task for political scientists. It is also an essential first step if we want to help policymakers understand what, if anything, they can do to mitigate this type of opposition to changes in the urban landscape.

[1]Corresponding author. E-mail: mvl@ps.au.dk.

Traditionally, nimby opposition has been explained in terms of homeowners' financial incentives to protect property values (Fischel 2005, 2001; Hankinson 2018) or residents' desire to exclude low-income people and racial minorities from their neighborhoods (Danielson 1976; Tighe 2012; Sahn 2021). Yet a growing body of research has uncovered anomalies that these accounts struggle to explain. Recent studies have found little or no difference in nimbyism between renters and owners once sociodemographic factors are held constant (Hankinson 2018; Wicki and Kaufmann 2022); that most people lack strong beliefs about the relationship between new development and home values (Nall, Elmendorf, and Oklobdzija 2022); and that citizens are often equally or even more likely to support affordable housing (Trounstine 2021; Wicki, Hofer, and Kaufmann 2022). Together, these findings suggest that existing theoretical models provide an incomplete account of why citizens oppose development projects in their neighborhoods.

We argue that citizen opposition to local construction projects is primarily driven by local preservationism—a strong preference for maintaining the status quo of the built environment. Opposition is less about who new buildings might attract or their effect on property values than about preserving the neighborhood's physical character. There are several reasons to think that most people are local preservationists. People may select into neighborhoods they find aesthetically pleasing, where the built environment structures everyday routines and social interactions in ways they find desirable, or where they imbue the surroundings with deeper symbolic meaning. Over time, these different attachments may also grow stronger through a process of acculturation. Wherever they originate, this local preservationism make residents resistant to change and help explain the pervasiveness of nimby opposition.

We identify three novel empirical implications of understanding nimbyism as a form of local preservationism. First, most citizens should express strong positive feelings about the appearance and character of their neighborhoods—a sentiment that cuts across demographic and socioeconomic groups. Second, individual-level variation in preservationist attitudes should strongly predict nimby opposition, even when controlling for factors such as homeownership or hostility toward outgroups. Third, nimby opposition should be weaker when new develop-

ments align with the existing built environment, since projects that fit their surroundings are less likely to clash with aesthetic preferences, disrupt neighborhood life, or seem out of place.

We explore these empirical implications using a large-scale factorial vignette survey experiment in Denmark (n = 28,850). In the experiment, respondents are presented with a hypothetical construction project that randomly varies in type, scope, and location. Respondents are recruited through probability sampling from the Danish civil registration records, enabling us to display the project on a personalized map of each respondent's local area. By randomly placing the project on this map, we unobtrusively manipulate both its proximity to the respondent's home and its fit with the existing built environment. This approach minimizes experimenter demand effects and allows us to estimate the causal impact of project type and geographical context on opposition.

Local preservationism is widespread among our respondents: 70 percent report that they are happy with the appearance of their local area and want it to retain its distinctive character. Importantly, local preservationism appears largely independent of anti-immigration sentiment and political conservatism, suggesting it operates as a separate dimension of political behavior. It also plays a significant role in shaping nimby opposition. Specifically, we show that proximity to a proposed project increases opposition more among strong local preservationists.

Developing a simple indicator of how well a residential project aligns with its surrounding built environment, we also show that projects with better contextual fit engender less nimby opposition. In particular, new residential construction encounters less resistance in areas that already contain recent residential development, whereas non-residential projects face as much opposition in such areas as elsewhere. While placing residential projects in areas where they fit in significantly reduces opposition, it does not alter respondents' beliefs about whether the project would lower property values or attract undesirable residents. This pattern supports the view that opposition is driven more by concerns over preserving neighborhood character than by economic or social considerations.

We also look at some cases where local preservationism predicts no difference in opposition, whereas alternative explanations would. When the physical characteristics of the development are held constant, we find no difference in nimby opposition between owner-occupied

housing and social housing, despite the latter often being associated with immigrants and lower-income residents. This challenges the view that nimbyism is primarily driven by social exclusion—at least in the Danish context. Likewise, after controlling for demographic factors such as age and income, we observe no significant difference in opposition between renters and homeowners, indicating that property-value concerns also do not strongly shape nimby opposition in this context.

An important implication of these findings is that policymakers seeking to minimize public backlash to new developments should not focus solely on compensating homeowners for potential property value losses or on excluding low-income residents and minorities (Tighe 2010; Foster and Warren 2022). Rather, the widespread local preservationist sentiment we identify suggests that policymakers should think more about whether proposed projects clash with the physical character of the neighborhoods in which they are located.

## Existing Explanations for Nimbyism: Home Values and Social Exclusion

Nimbyism stands for "Not In My Back Yard"-ism. It refers to a phenomenon where individuals or communities oppose the introduction of new developments, projects, or facilities if these are located near their home (Dear 1992; Schively 2007; Hankinson 2018). Nimby opposition towards a project signifies that citizens who live near the site of a project would have been less likely to oppose it if the project was sited further away. In a causal model, it can be conceptualized as the negative effect of proximity to a project on opposition towards this project.

Nimby opposition has been identified in a wealth of contexts, including for housing developments (e.g., Wicki, Hofer, and Kaufmann 2022; Marble and Nall 2021; Trounstine 2009), energy projects (e.g., Devine-Wright 2009; Stokes 2016), landfills (Furuseth 1990) and drug treatment facilities (e.g., Benedictis-Kessner and Hankinson 2019). Understanding the sources of nimby opposition is important, because it is such a potent force in local politics (Sahn 2024; Einstein, Glick, and Palmer 2019), and because different explanations carry different policy implications for how policymakers might mitigate local opposition (Fischel 2001).

Existing explanations for nimby opposition have focused on the concept of negative local externalities — costs imposed on those living near a proposed project or facility. While there

are a number of different potential costs related to new developments, the existing literature highlights two key factors: (1) neighborhood demographics and (2) home values.

Urban politics in the 20th century was defined by growing economic segregation (Trounstine 2018). Urbanization coupled with new transportation technology, created suburbs where affluent citizens could live while commuting to central business districts by car or public transit. These suburbs became hotbeds of nimby activism and set up strong growth restrictions to oppose further densification (Fischel 2001; Trounstine 2020). The exclusionary politics of the affluent suburbs led early analysts to suggest that nimbyism was driven by a fear of new residents, especially those with low incomes (Danielson 1976). In this view, citizens worried about new development projects, because these would lead to congestion of public goods, such as parking, parks, or schools (Peterson 1981; Tiebout 1956). In the United States—and later in Europe following waves of migration—non-white residents became a particular focus of concern, both due to perceptions that they would strain public services and because of outright racism (Tighe 2010). One implication of this social exclusion explanation is that nimby opposition should be stronger for projects that change the demographics of the neighborhood, especially if it attracts poor people and minorities. On the other hand, high-end or luxury housing that attracts well-off residents should incur less opposition.

While exclusionary motives have undoubtedly shaped nimbyism in the past (Sahn 2021), recent research challenges the notion that social exclusion remains its primary driver. In a series of conjoint survey experiments Wicki and Kaufmann (2022) finds that citizens in Switzerland tend to prefer housing projects with lower rents. Similarly, Trounstine (2021) shows that Americans generally support setting aside units for low-income families and are largely indifferent to the racial composition of prospective residents. In a comparative survey across six American and European cities, Wicki, Hofer, and Kaufmann (2022) reports that citizens favor housing projects that include rent control and inclusionary zoning measures. These findings suggest that the exclusionary roots of nimbyism may be weakening, reflecting broader societal shifts toward post-materialist and cosmopolitan values that prioritize social equity and inclusion (Inglehart and Welzel 2010).

Nimby opposition has also been connected to concerns over home values (Fischel 2005; Fischel 2015). Owning a home gives citizens a strong incentive to be involved in local politics because home values are influenced by local political decisions, such as the quality of schools, levels of point-source pollution, and other kinds of land use decisions (Fischel 2005; Incerti 2024). For most homeowners, their property represents their largest, non-diversifiable asset. Although the actual impact of individual projects on home values is often uncertain, Fischel (2005) argues that risk-averse homeowners are likely to oppose such projects to minimize potential fluctuations in the value of their homes. If nimby opposition is primarily driven by concerns over possible depreciation of home values, strategies like offering compensation to affected homeowners (Foster and Warren 2022) or implementing an insurance scheme (Fischel 2015) should effectively reduce opposition to change.

A straightforward implication of the home value explanation is that nimbyism should be concentrated among homeowners. While surveys generally find that homeowners exhibit more nimby opposition than renters (e.g., Marble and Nall 2021), renters are also nimby (Wicki and Kaufmann 2022), and the difference between owners and renters narrows or disappears when controlling for potential confounding factors. For instance, Hankinson (2018) finds that in his survey of San Francisco voters, the gap between homeowners and renters is more than halved after accounting for age, income, ideology, and race (p. 486). Similarly, in a study of Switzerland, Wicki and Kaufmann (2022) find that homeowners and renters are equally likely to be nimby after controlling for background characteristics.

Clearly, these findings do not suggest that home values and social exclusion are unimportant. We know that these factors are key drivers of public opinion and political behavior (e.g., Larsen et al. 2019; Enos 2016). However, they indicate that it may be valuable to explore alternative explanations for nimbyism. Below, we develop one such alternative explanation, focusing on citizens' desire to preserve the physical character of their neighborhood.

## Local Preservationism

In neighborhood meetings, citizens often express concerns that development projects will harm their neighborhood's unique character (Sahn 2024; Einstein, Glick, and Palmer 2019). Political scientists and economists have sometimes dismissed such statements as veiled concerns about

property values or exclusionary attitudes (Fischel 2001; Tighe 2010). Building on ethnographic work in urban planning that conceptualizes nimbyism as place-protective action (e.g., Devine-Wright 2009; Davidson and Howe 2014), we argue that these statements should be taken both literally and seriously.

Our starting point is that most citizens hold a *strict* and *intrinsic* preference for the current physical character of their neighborhood. Strict, in the sense that they generally view the existing built environment as preferable to alternative or newer forms of development. Intrinsic, in the sense that the desire to preserve the built environment is not merely a means to another end—such as protecting home values or excluding new residents—but an end in itself. We refer to this status quo preference as *local preservationism*. Local preservationism reflects an attachment to the existing built environment that can take different forms: to the aesthetic character of a neighborhood, to the social routines and interactions its physical form enables, or to the meanings residents attach to their surroundings. For example, adding a modern residential building to a neighborhood of 1950s and 1960s houses may clash with residents' aesthetic preferences for homes from that period. Newer housing designs are also less likely to have front porches and more likely to feature large private backyards, closing neighbors off from one another and altering patterns of social interaction. Even if residents find a new building's design acceptable in isolation, they may still feel that such structures are out of place in their neighborhood. We remain agnostic about whether aesthetic concerns, social routines, or symbolic meanings are the dominant driver of local preservationism, and think of them as overlapping sources of attachment to the built environment.

Psychologists and economists have identified status quo preferences across a wide range of domains (Samuelson and Zeckhauser 1988; Kahneman, Knetsch, and Thaler 1991; Fernandez and Rodrik 1991), and several mechanisms proposed to explain the status quo preference in other domains may also apply to preferences over the local built environment. For example, there might be a neighborhood-level endowment effect, where choosing a neighborhood causes residents to value it more highly simply because it is theirs (Marzilli Ericson and Fuster 2014). Loss aversion may also play a role, as citizens may be reluctant to give up the familiar look and feel of their surroundings (Kahneman and Tversky 1984). Another contributing factor

could be neighborhood selection: all else equal, individuals are likely to choose areas they find particularly attractive or charming. Finally, local preservationism may grow over time as citizens get used to how things in their local area look and feel—a form of acculturation (for a potential psychological explanation for the status quo bias along these lines, see Eidelman and Crandall 2012).

Of course, citizens hold preferences beyond those related to the built environment, and when a new development project satisfies some of these other interests, they may be more willing to accept changes to their surroundings. For example, if citizens seek better access to education for their children, they may support a new school despite changes to the local physical landscape. Similarly, if they desire improved access to groceries, they may accept the construction of a new supermarket. Nonetheless, our baseline expectation is that, absent such competing considerations, citizens prefer to preserve the built environment as it currently stands.

Local preservationism is distinct from in-group bias and conservatism, since it is not primarily about the relative power of authorities or social groups (Pratto et al. 1994; Altemeyer 1981). At the same time, it draws on the conservative intuition that existing social structures—in this case, the physical structures of a neighborhood—are valuable, and that redevelopment risks breaking something that cannot easily be put back together. It is also important to acknowledge that individuals may infer who will live in a building based on its physical design. At its core, however, local preservationism emphasizes that beyond such inferences, people care deeply about maintaining the character of the built environment. They value structures not because of who they signal will inhabit them, but because they are aesthetically meaningful and shape how residents interact with their neighborhood.

Finally, local preservationism is not a form of place-based identity. Place-based identities concern whether the place one lives—such as a neighborhood or city—is an important part of one's self-concept (Hopkins 2018; Stedman 2002). Local preservationism, by contrast, is not about how individuals see themselves, but about their how they see their neighborhood. The two may be correlated, or even causally connected—for instance, a sense of belonging might heighten the value placed on local physical structures—but they are conceptually distinct.

***Empirical Implications and Competing Predictions***

The local preservationism explanation complements—rather than challenges—existing accounts of nimbyism. Like prior explanations, it acknowledges that many people oppose new developments in their local area. However, it introduces a novel mechanism: opposition is driven not by economic concerns or social exclusion, but by a desire to preserve the physical character of the neighborhood. This shifts the focus away from economic self-interest or prejudice and toward an attachment to the character of one' neighborhood. Below, we outline three novel implications of the local preservationism account that have not been explored in prior work. We also identify areas where this theory diverges from existing explanations—highlighting cases in which the local preservationism account predicts no difference in nimby opposition, while alternative theories would expect such a difference.

First, *most citizens want to preserve the character of their local area*. That is, we expect most people to be satisfied with how their neighborhood looks and to view it as special or unique. If they do not, there is little to preserve. Moreover, citizens should express relatively strong feelings about the physical appearance of their local area. If these attachments are weak, other concerns are likely to take precedence over the desire to preserve the built environment.

Second, although we expect local preservationist sentiment to be widespread, we also anticipate individual-level variation. Not everyone has lived in a place long enough to form strong attachments, and some may reside in areas they do not find particularly attractive. If local preservationism drives nimby opposition, then *strong local preservationists should exhibit more nimby opposition than weak local preservationists*.

Third, *nimby opposition should be weaker when development projects align more closely with the existing built environment*. In other words, the better a project fits with its surroundings—whether in height, function, or architectural style—the less resistance it should provoke. A new building that resembles existing ones in the neighborhood is less likely to be seen by local preservationists as ugly, disruptive, or out of place.

Local preservationism also makes some predictions that diverge from those of the home value and social exclusion explanations. First, local preservationism does not predict heightened opposition to projects based on their potential to attract poorer or minority residents.

Instead, opposition should depend on the extent to which a project alters the physical character of the built environment—regardless of who is expected to live there. Second, if local preservationism shapes citizens' responses to new developments, their economic stake in the housing market should play a limited role in explaining nimbyism. While homeowners may be more likely to express local preservationist attitudes—due to differences in where and how they live—we would expect demographically similar owners and renters to respond similarly to new construction.

## Research Design

Exploring the empirical implications of local preservationism poses several challenges. First, it requires developing an individual-level measure of local preservationism and applying it to a representative sample. Second, we must precisely estimate variation in nimby opposition across projects, and individuals, which involves analyzing interaction effects—an approach that is costly in terms of statistical power (Sommet et al. 2023). Third, to credibly assess whether people respond to how well a project fits into the existing built environment, we need to manipulate both the project and the characteristics of the project site (i.e., geographic location). While varying project features in experiments is relatively straightforward, manipulating how well it aligns with the built environment is more difficult. Explicitly telling respondents that a project "fits in" risks introducing experimenter demand effects. Instead, we aim to test whether respondents intuitively consider a project's compatibility with its surroundings, even without being prompted to do so.

To address these challenges, we conducted a survey experiment in which respondents evaluated a hypothetical construction project. The sample consists of 28,850 individuals drawn through stratified random sampling from the Danish population registry, yielding a large, nationally representative dataset. Sampling from the population registry allows us to link each respondent to administrative data on their local context. Using this information, we can randomly position the hypothetical development project in each respondent's neighborhood and present them with personalized maps indicating the project's location. This approach can gener-

ate random variation in both project type and in the built environment surrounding the proposed project site, which enable us to assess each project's compatibility with its surroundings.[2]

Participants in the survey experiment were contacted by the private survey firm Epinion via their government-issued email addresses in June 2023. To incentivize participation, respondents were entered into a lottery to win one of ten vouchers worth 1,000 DKK (approximately 135 EUR) each. The response rate was 27 percent. We employed stratified random sampling by municipality to ensure representation across different types of areas. As a result, residents of smaller municipalities are somewhat overrepresented in the sample. To correct for this imbalance, we apply design weights in all reported analyses to account for the unequal probability of participation across municipalities.

The survey had three parts. The first consisted of sociodemographic questions, including whether respondents were renters or homeowners. In the second part, respondents were asked about local issues. It is in this part that we measure local preservationism. Finally, the survey included the vignette experiment presented below.

***The Experimental Vignette***

Table 1 presents the text of the vignette and the different attributes. In constructing the vignettes for respondents, each level within an attribute was randomly selected with equal probability. Respondents received a single version of the experimental vignette. To increase engagement, they were informed that while the project was hypothetical, their anonymized responses would be shared with their city council. Additionally, respondents were asked to pledge to provide precise, complete, and accurate answers. A technique shown to improve response quality in previous studies (Hibben, Felderer, and Conrad 2022). Ninety-one percent of respondents were able to form an opinion on the project based on this information, more than the 83 percent who could place themselves on a five-point left-right self-placement scale. Furthermore, only seven

[2]This study was partially preregistered. The third empirical implication regarding neighborhood fit was not preregistered, so we do not classify this as a preregistered study. Some post-hoc adjustments were also made to the analyses due to the structure of the observed data. All deviations from the preregistration are discussed in detail throughout the analysis, and the results of preregistered ancillary tests are reported in the Online Appendix.

**Table 1:** Experimental Vignette

The city council is considering whether to allow construction of [project type] on a plot of land in the municipality. It will be a construction project covering [size] square meters and have [height].

The project will be located at the red dot in the map below.

[The construction site will be about *d* km from your home.]

| Type of project | Size of project | Height of project | Distance |
|---|---|---|---|
| a. social housing | a. 500 | a. one story | 1–10 KM |
| b. owner-occupied housing | b. 1,000 | b. three stories | |
| c. rental housing | c. 10,000 | c. five stories | |
| d. retail | | d. seven stories | |
| e. offices | | | |
| f. a public institution | | | |
| g. factory premises | | | |
| h. a biogas plant | | | |
| i. a sewage plant | | | |

percent of respondents strongly agreed that it was unrealistic for the municipality to permit the project. This suggests that a large majority of respondents found the proposed project somewhat realistic and sufficiently detailed to form an opinion.

In selecting different project types we were careful to select projects that carried different implications in terms of who would be moving in (e.g., social vs. owner-occupied housing), allowing us to explore the social exclusion explanation, while holding other physical characteristics of the building (i.e., its size and height) constant. We also selected project types that would clearly vary in whether they fit into a large number of places. That is, residential projects, for instance, tend to fit into the built environment in many places where retail, offices, or a sewage plant would not. Additionally, to ensure our results were not overly dependent on the selection of specific project types, we introduced slight variations within each overall project type.

As part of the vignette, respondents were presented with a personalized map of where the project was located. Figure 1 presents examples of these maps. We centered each map around the location of the proposed construction project. To site the project in each respondent's neighborhood, we created a spatial donut centered on the respondent's home address. The outer ring had a radius of $d$ km and the inner ring had a radius of $d-1$ km, where $d \in \{1, 2, \ldots, 10\}$ with equal probability. The project was placed at random within this donut. As a result, the

distance from the respondent's home to the center of the red dot varies from 0-10 km. We drew a red circle with a 300 m radius to signify the project location on the map. We made sure that the project was not placed outside the respondent's municipality or in other impossible locations, such as the ocean. In these cases, we repeated the assignment procedure until we found a possible location. This creates some selection bias into distances, which we control for by employing a set of dummy variables for whether respondents were 'never-takers' at specific distances. See Online Appendices A and B for more details on how these maps were created, and on how we deal with cases where projects can not be placed at all possible distances.

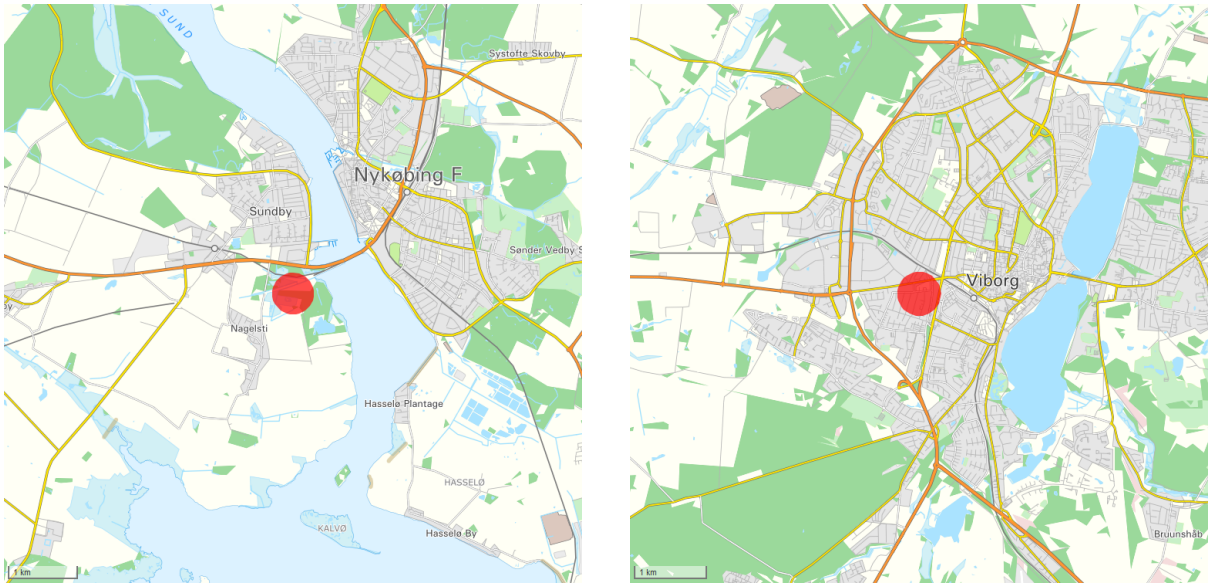
We selected the 0–10 km range to capture distances far enough away that we were confident any additional distance from the project would have minimal effect, allowing us to capture the full extent of the nimby effect. In the analyses below, we group distances into three proximity categories: $\leq$ 2 km (0–1 and 1–2 km donuts), $>$ 2–$\leq$ 6 km (2–3, 3–4, 4–5, and 5–6 km donuts), and $>$ 6 km (6–7, 7–8, 8–9, and 9–10 km donuts). The 2 km threshold corresponds roughly to a 10–20 minute walk—well within what most people consider their "own area"—and aligns with common practice in the nimbyism literature, which often uses a $\sim$3 km (2 mile) cutoff (Hankinson 2018; Marble and Nall 2021; Benedictis-Kessner and Hankinson 2019). In line with earlier work, our design thus focuses on distances at the scale of neighborhood and municipalities; it does not directly capture hyper-local dynamics (i.e., what happens it a project is directly next to your home).

As a control group 20 percent of respondents were not shown a map. We generally omit these respondents from the analyses below. Half of the respondents were also told directly that "The construction site will be about $d$ km from your home." In the analysis, we do not distinguish between those who were and were not directly informed about the approximate distance, because these two groups exhibit the same level of nimby opposition (see Online Appendix C).

***Measuring Local Preservationism***

To measure individual-level differences in local preservationism, we asked respondents to agree or disagree with eight statements about their local area. These items were designed to capture both the direction and intensity of respondents' preferences over the character of their neigh-

**Figure 1:** Example of map treatments




*Note:* The maps above are miniaturized. In the experiment, each map was 750 × 750 pixels (about 20 cm or 7.8 inches).

borhood, and to reflect not only aesthetic considerations but also attachments to the neighborhood's social fabric. To avoid priming effects, the questions were asked before introducing the vignette experiment, ensuring that participants did not respond with a specific change to their local area in mind. To measure direction, respondents were presented with the statements 'I want my local area to retain its special character,' 'I'm happy with the way my local area looks,' and 'My local area is truly unique.' To measure intensity, we included the statements 'I don't have strong feelings about how my local area looks' and 'I don't think too much about what my local area looks like.'

We also included items designed to measure local preservationism more indirectly. The statements 'I mainly live where I do for practical reasons,' and 'I cannot imagine living anywhere else' intended to assess whether the character of the local area influences residents' decisions to live there. Additionally, we directly measured respondents' desire for change in their local area with the statement: 'I want my local area to change.'

We construct two summary scales based on these items. The first scale includes all eight items, incorporating both direct and indirect measures of preservationism.[3] The second scale

[3]The summary scale has an overall reliability coefficient of 0.62. While this is relatively low, it may reflect the multi-dimensionality of the scale. If we focus only on the three items related

includes only the five items that explicitly measure the direction and intensity of respondents' feelings about their local area, and arguably provides a more precise measure of local preservationism.

***An Indicator of Where Residential Projects Fit In***

Developing an indicator for whether a project fits into the built environment requires balancing two considerations: it must be narrow enough to capture meaningful ways in which a development can align with its surroundings, yet broad enough to ensure that a sufficient number of projects are classified as "fitting in" (Sartori 1970). A highly restrictive definition would yield a precise measure of nimby opposition when a development matches almost perfectly, but it would also produce too few cases to analyze. Our aim, instead, is to construct an indicator that distinguishes meaningfully between better and worse fit, while acknowledging that we capture only certain ways in which developments can integrate into their surroundings.

In developing this indicator, we focus on identifying sites where residential development projects fit in better or worse. Residences—whether social housing, owner-occupied, or rental—are the most common building type in Denmark, which makes it easier to identify areas where new housing can blend into the built environment. By contrast, commercial projects such as offices, factories, or retail are less prevalent and exhibit greater architectural variation, making it harder to identify sites where they would plausibly fit in.

We classify a project site (i.e., the red dot on the personalized maps) as one where residential projects fit better when it has: (1) more than five existing buildings, (2) at least one building constructed after 1992, and (3) at least one residential building.[4] Sites that fail to meet these criteria are coded as a worse fit for residential projects. To measure the local built environment around each project site, we merge the coordinates of the proposed location with data from the Danish Building and Housing Registry. Roughly half of respondents were asked to evaluate a site we classified as a better fit for residential developments (see Online Appendix E for details).

to the direction of respondents' preferences for how their local area looks, or the two items measuring the intensity of their feelings, the reliability coefficient falls within an acceptable range ($>0.7$).

[4]See Appendix G for results using alternative classifications.

The three criteria we use in our indicator of fit align closely with widely used planning concepts, such as zoning for use, historical preservation, and development status. Projects that fail to meet them will, on average, be more disruptive—not only to the neighborhood's aesthetic character but also to established social routines and to residents' sense of place and identity.[5] At the same time, this is necessarily a crude measure: it cannot capture all the subtleties of how the built environment structures everyday life or how residents interpret the meaning of change. Its strength, however, is that it can be applied consistently across contexts, allowing us to capture systematic variation in fit. To partly address the limitations of the indicator, we later test whether the effect of fit is particularly pronounced for project types and locations where new development is especially likely to compromise neighborhood aesthetics, disrupt social routines, or alter perceived identity.

Importantly, while our indicator relies only on variation in project sites, we also leverage variation in project type in our analysis. Specifically, we look at whether alignment between project site and project type is what lowers nimbyism, i.e., whether nimbyism is lower when, and only when, a new *residential* project is proposed at a site where a *residential* project fits better.

A key challenge in these analyses is that project locations are assigned based on where respondents live. As a result, the probability that a respondent is assigned a site where residential developments fit in better vary across respondents. To the extent this variation is correlated with nimby opposition it creates a selection problem. We address this problem by applying inverse probability weighting to our estimates. Specifically, we weight each respondent $i$ by the inverse of their probability of being assigned site where a residential project would fit better. We calculate these weights as

$$w_i = \frac{f_i}{p_i} + \frac{1 - f_i}{1 - p_i}$$

[5]We acknowledge that within these two categories—better and worse fit—there remains variation in how well individual projects match their surroundings. Some "better fit" sites may still produce developments that stand out, while some "worse fit" sites may nonetheless allow relatively compatible projects. On average, however, residential projects at better-fit sites should align more closely with their built environment than those at worse-fit sites.

, where $w$ represents the weight assigned to respondent $i$, $f$ is an indicator of whether the respondent was assigned a project site where residential projects fit better, and $p$ is the probability that the respondent was assigned such a site. We estimate $p$ by randomly relocating the project to various potential locations, and then we calculate the proportion of the locations where a residential project would fit better. By applying these weights, we perfectly balance the control and treatment groups.

***Measuring Nimby Opposition***

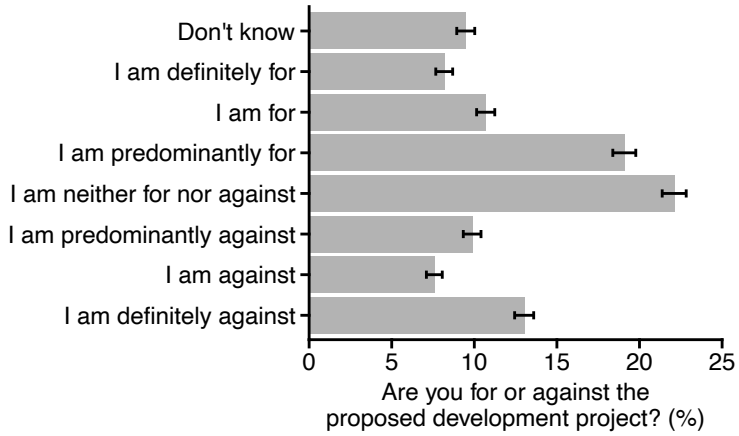
We define nimby opposition as the negative effect of the proximity to a proposed project on the level of opposition towards that project. In our experiment, we identify this effect by analyzing how the level of opposition varies with the distance between the respondent's home and the proposed project. This approach allows us to estimate the degree of nimbyism across different types of projects and among different groups of respondents.

Opposition to the proposed project is measured on a seven-point Likert scale. We asked respondents: "Are you for or against the proposed development project?". As can be seen in Figure 2, respondents were about evenly split in their preferences over the proposed project across treatment conditions, with 30 percent of respondents opposing the project and 38 percent supporting it. However, there is a stark contrast in the intensity of these views. Supporters of development projects are likely to express only mild support, whereas opponents tend to express strong opposition. This pattern is consistent with previous research on public meetings about proposed development projects, which similarly finds that opposition is often more intense and vocal than support (Einstein, Glick, and Palmer 2019; Sahn 2024).

Since we are mainly interested in *nimby opposition*, we create a dichotomous variable based on whether you oppose the project or not. This allows us to make more straightforward interpretations of the results, and avoid situations where moving from being "for" to "predominantly for" a project is interpreted as increased opposition. We group those who respond with "don't know" together with other non-opponents (i.e., zero).[6]

[6]We preregistered that we would exclude those who responded "don't know" from the analysis. However, those who were treated with a development project that was farther away from their own home were more likely to answer "don't know". Therefore, removing them from the

**Figure 2:** How opposed or supportive were our respondents to the development projects?




*Note:* Error bars represent 95% confidence intervals. Descriptive shares are weighted by respondents' probability of being sampled for the survey and non-response rates to match the joint distribution in the Danish population for age, gender, and education (N = 28,850).

Figure 3 uses this dichotomized opposition variable to estimate the overall level of nimby opposition. In particular, it shows the average levels of opposition at selected distances, overlaid with the predicted opposition from a linear regression model that uses the logarithm of distance as a predictor. We identify a great deal of nimby opposition across projects and respondents, as opposition to a development project decreases when the distance between the project and respondents' homes increases.[7]

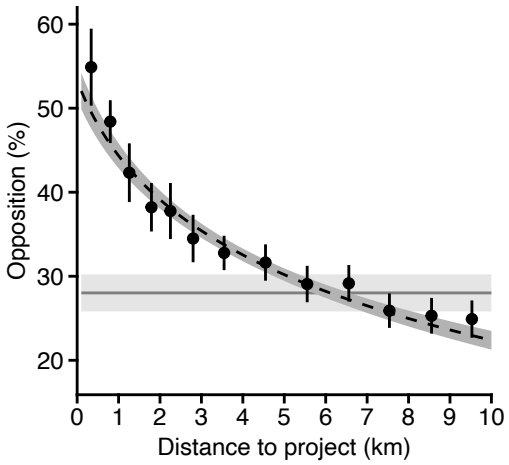
## Local Preservationism is Widespread

Figure 4 presents the responses to the eight items we used to measure local preservationism. The last four items are reversed, so local preservationists are expected to disagree with them. Our results indicate that local preservationism is widespread. Approximately 70 percent of respondents are satisfied with the appearance of their local area and want to preserve its special character. Similarly, about 60 percent agree that their local area is truly unique, with only 16 percent disagreeing. Most respondents also express strong feelings about the physical char-

analysis could lead to a post-treatment bias in our estimate of nimby opposition (Montgomery, Nyhan, and Torres 2018).

[7]We report marginal means for all remaining project attributes in Online Appendix C. For estimates of nimby opposition across alternative operationalizations of distance, see Online Appendix D.

**Figure 3:** Does the distance between the resp.'s home and the development project affect opposition?




*Note:* Error bars and shading represent 95% confidence intervals (N = 26,002). The horizontal line indicates the proportion of respondents who oppose the development project and were given no information about the project's location (N = 2,848).

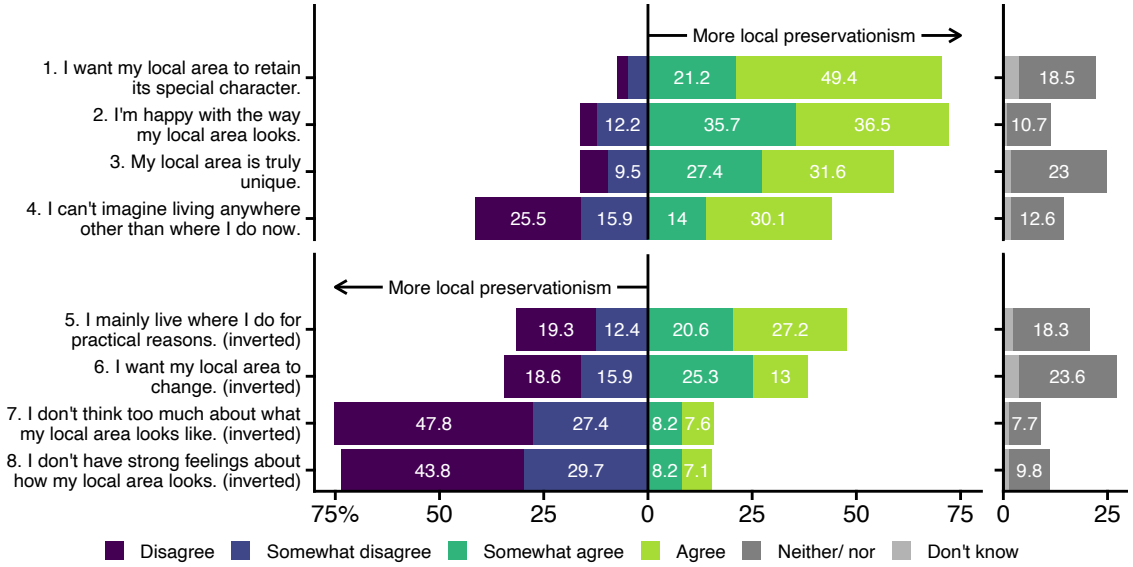
acter of their neighborhood. Only 15 percent report that they do not have strong feelings. A comparable pattern emerges when respondents are asked whether they think much about how their local area looks. Importantly, these views are not expressed in reaction to a specific threat or proposed change, making it less likely that they serve merely as a pretext for opposing a particular project or development.

Respondents are more divided on items that measure local preservationism more indirectly. For example, they are evenly split on whether they can imagine living somewhere else. Thirty-eight percent agree that they want their local area to change, while 35 percent disagree. However, it is unclear whether this desire for change refers specifically to the physical appearance of the area or to other concerns.

We combine these eight items into a summary scale ranging from 0 to 1, with missing values imputed to the item mean. On this index, the median respondent scores 0.64, and only 15 percent score below the midpoint of the scale (0.5). While there is some variation in local preservationist sentiment, the majority of respondents hold views that lean toward preservationism.

Above, we argued that local preservationism should be understood as conceptually distinct from ideological conservatism and out-group bias. They also appear to be empirically distinct. There is no meaningful correlation between our local preservationism index and a five-point

**Figure 4:** How widespread are local preservationist sentiments?




*Note:* Descriptive shares are weighted by respondents' probability of being sampled for the survey and non-response rates to match the joint distribution in the Danish population for age, gender, and education (N=28,086).

left-right self-placement scale ($r = 0.02$), nor between local preservationism and agreement with the statement, 'My municipality should accept more refugees' ($r = 0.03$). This suggests that local preservationism is an overlooked dimension of individual-level variation that operates independently of conservatism and exclusionary attitudes.

## Nimby Opposition is Most Intense Among Strong Local Preservationists

Does individual-level differences in local preservationism explain differences in nimby opposition? To find out, we split our sample into strong and weak local preservationists based on our pre-treament measure of local preservationism, and estimate nimby opposition for both groups. We define weak preservationists as those in the lowest tercile on our index (approximately below .6) and strong preservationists as those in the highest tercile (approximately above .75).[8] Figure 5 plots nimby opposition—specifically, the relationship between distance and opposition to the project—for both strong and weak local preservationists in panel (a), and the differences

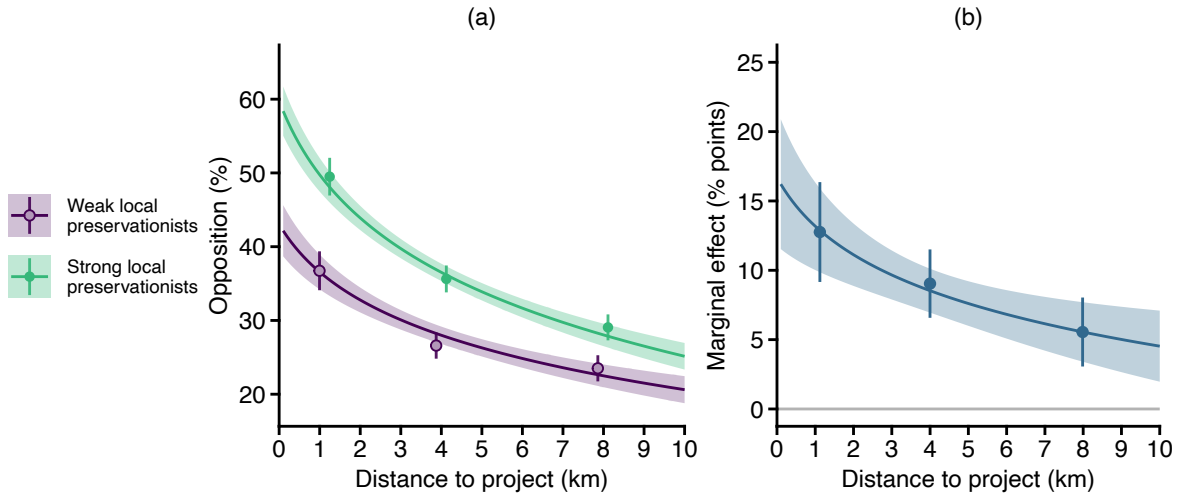
[8]We had preregistered a median split, which also recovers a statistically significant interaction as shown in Online Appendix F. However, we use a tercile split in this analysis to prevent the 'weak local preservationist' category from including too many respondents with relatively strong status quo preferences, which would otherwise reduce the contrast between the groups.

between these two groups in panel (b). Opposition is shown across both logged distance and a trichotomized distance measure (≤2 km, >2–6≤ km, >6 km).

Strong local preservationists display more nimby opposition than weak local preservationists. The predicted decrease in opposition for projects located far away (>6 km) versus those situated close by (≤2 km away) is 7 percentage points *larger* among strong preservationists (95% CI: 3-12). This corresponds to a 55 percent difference in nimby opposition between strong and weak local preservationists. Interestingly, some of the difference in opposition between strong and weak local preservationists persist even at the maximum distance, which suggests that strong local preservationists are also more inclined to want to preserve areas in their municipality that are not very close to their homes.

The relationship between local preservationism and nimby opposition does not appear to be driven by sociodemographic or ideological differences between weak and strong local preservationists. Controlling for gender, age, income, education, homeownership, and left-right self-placement—both as linear terms and as interactions with distance—does not substantially influence the estimated difference in nimbyism between strong and weak local preservationists. We present these results in Figure 6.

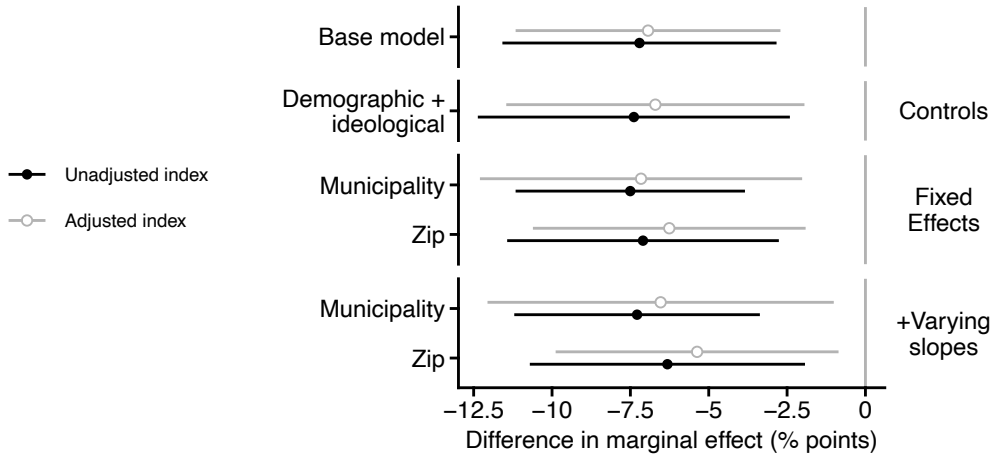
**Figure 5:** Are strong local preservationists more nimby?




*Note:* Error bars and shading represent 95 % confidence intervals. N = 19,367.

We also find no evidence that the relationship between local preservationism and nimby opposition is driven by strong and weak local preservationists living in different types of areas.

**Figure 6:** Can individual or contextual confounders account for differences in nimbyism between strong and weak local preservationists?




*Note:* Dots represent difference-in-difference effects on opposition of being presented with projects proposed nearby ($\leq$2 km away) contra far away (>6 km) for strong contra weak local preservationists. Controls (gender, age, income, education, homeownership, left–right self-placement) are included linearly and interacted with distance. Error bars represent 95 % confidence intervals. N = 19,367 (Adj. N = 20,824) expect in model with controls due to missing data (N = 15,827, Adj. N = 17,008).

We ran several models with municipality and zip code fixed effects, allowing the effect of distance to vary by the municipality or zip code where the respondent lived. Controlling for these contextual factors does not affect the results. This is important, because it suggests that differences between strong and weak local preservationists are not the result of differences in the objective quality of the neighborhoods they live in. If this were the case, we would expect at least some of the difference between the two groups to diminish after accounting for the context fixed effects. However, as shown in Figure 6, the difference is not attenuated in these more restrictive models.

All of the results are robust to using our adjusted, and more focused, index of local preservationism. In Online Appendix F we also show that nimbyism does *not* vary with other indicators of place-based attachment. For instance, the strength of one's place-based identity — a subjective perception of belonging to one's local area — does not moderate nimbyism. Only local preservationism moderates nimbyism.

Taken together, these findings highlight that individual-level differences in local preservationism significantly influence nimbyism, with strong preservationists exhibiting notably higher opposition to nearby projects than their weakly preservationist counterparts. Importantly, we

have also shown that this relationship is not driven by ideological and sociodemographic factors, or by differences in neighborhood characteristics.

## Nimbyism Is Weaker When Projects Fit Better Into the Built Environment

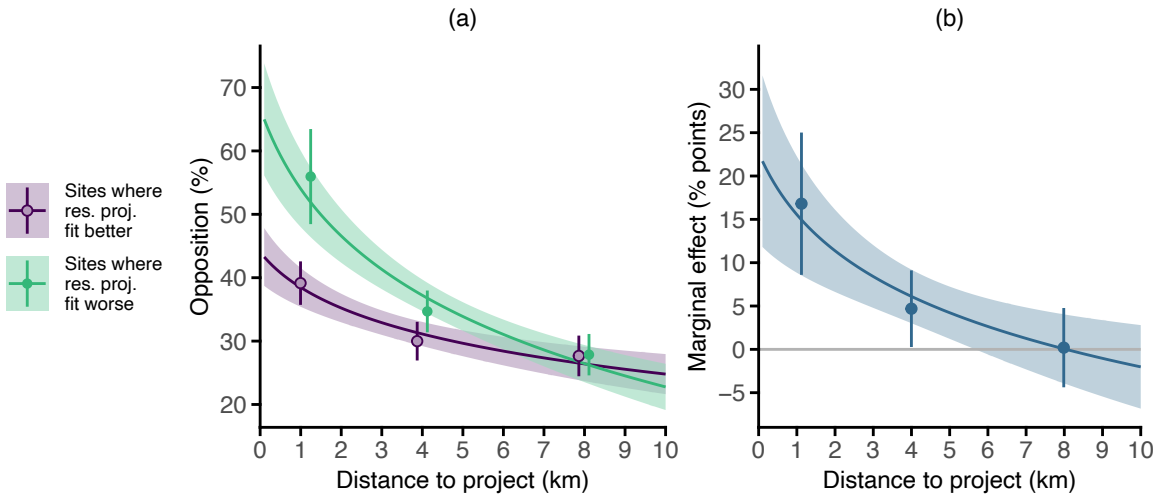
Do citizens evaluate development projects differently depending on whether they fit into the existing built environment? To answer this, we examine whether nimby opposition to residential projects is lower when they are placed at sites with newer residential buildings (a better fit for residential development) versus at sites without them (a worse fit), and whether this reduction is specific to residential projects rather than a general preference for development in areas with newer buildings. Specifically, we use linear regression models with three-way interactions between project type, project fit, and distance, applying inverse probability weights to adjust for the likelihood of assignment to better- or worse-fit sites. This design allows us to assess whether the effect of distance on opposition depends on the congruence between project type and the built environment.[9]

Figures 7 and 8 present the key estimates from these models, focusing on respondents evaluating residential and non-residential projects, respectively. For those who evaluate residential projects, we find that the decline in opposition between projects proposed within 2 km and more than 6 km away is 17 percentage points smaller when the site is a better fit for residential development (95 pct. CI: 7–26) than when it is a worse fit. That is, the effect of distance on opposition is reduced by 59 pct. when projects are located at better-fit sites. Conversely, a site being a better fit for residential projects has no discernible effect on the relationship between distance and opposition for non-residential projects. The difference in effects across residential and non-residential projects is statistically significant ($p < 0.005$), indicating that the result is not driven by a general openness to development in areas with newer residential buildings. If that were the case, we would also expect opposition to *non-residential* projects to decline when residential projects fit better. Instead, we find no decline in nimbyism for non-residential

[9]Since these weights are derived from detailed administrative data about respondents' local areas, they render individual survey respondents identifiable. As a result, we are unable to share the data used in the analyses for this section.

projects, reinforcing our interpretation that the effect is driven by congruence between project type and the built environment.

**Figure 7:** Does project fit attenuate nimbyism for residential projects?

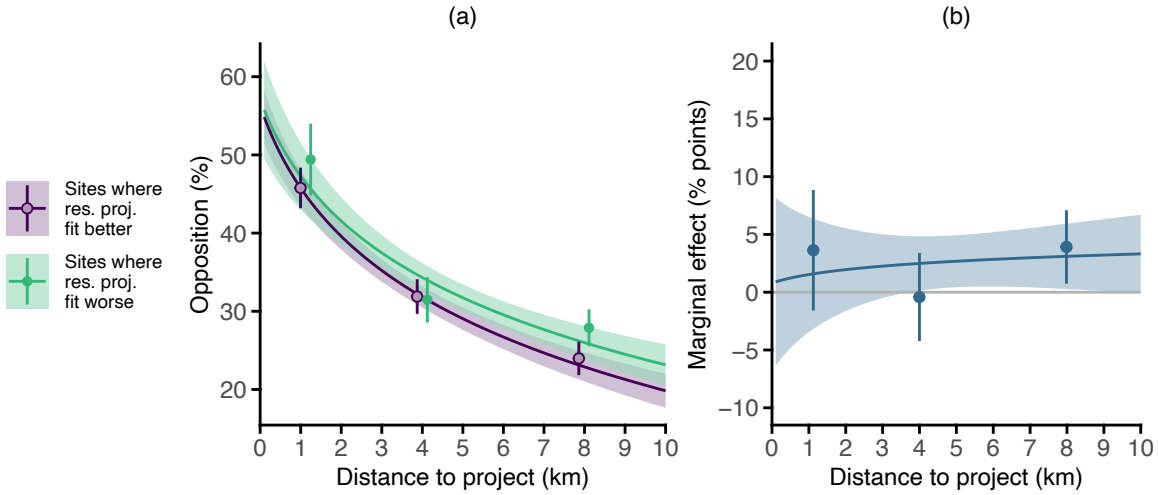



*Note:* Error bars and shading represent 95% confidence intervals. Residential development projects N = 7,425. Full model N = 22,192. Weighted by the inverse probability that respondents were assigned a site where residential projects fit better.

Why do respondents accept projects placed in worse-fitting areas when they are placed farther away? An obvious explanation is that they simply care less about areas at a distance (i.e., they are only *local* preservationists), but they may also just be less familiar with these areas, and don't know whether they fit in. The results presented in Figure 7, however, suggest that limited knowledge is not the lone driver. If uncertainty alone explained the pattern, we would expect respondents to become more opposed to projects in areas that otherwise align with the built environment when these were placed farther away, since respondents should assume there is some probability that the projects are located in areas where they do not fit in. Instead, opposition declines across the board as distance increases.

To what extent do our results depend on the criteria used to define whether residential projects fit in at a given site? In Online Appendix G, we assess the robustness by varying the three criteria used to construct this indicator—for example, redefining what qualifies as recent development or altering the threshold number of nearby residential buildings. Across all alternative definitions, we consistently find lower opposition to nearby residential projects with a better fit and no significant differences at greater distances.

**Figure 8:** Placebo test: Is nimbyism lower for non-residential projects proposed at sites where residential projects would fit in?




*Note:* Error bars and shading represent 95% confidence intervals. Non-residential development projects N = 14,767. Full model N = 22,192. Weighted by the inverse probability that respondents were assigned a site where residential projects fit better.

### *Fit, Project Traits, and Neighborhood Context*

If residents respond to our indicator of fit because they want to preserve neighborhood character, then its effect should be larger where new projects are most likely to compromise aesthetics, disrupt social routines, or alter perceived identity. To test this, we examine whether the effect of fit varies across project and neighborhood characteristics. Results are summarized here and presented in full in Appendices H and I.

We first consider project height. In Denmark, where most buildings are low-rise, multi-story projects are likely to stand out everywhere, regardless of site conditions. By contrast, one-story projects blend more easily if the site is otherwise compatible. If opposition reflects preservationist concerns, the effect of fit should therefore be stronger for one-story projects. The results point in this direction—the effect of fit is larger for one-story projects—but the difference is not statistically significant. We also examined project size (ground coverage) and find no meaningful variation in the impact of fit or nimby opposition in general.

Turning to neighborhood context, we expect fit to matter most where residents have stronger attachments to their surroundings. Dense and high-value neighborhoods exemplify such contexts. In dense areas, available land is scarce, and new projects are more likely to replace open space or intrude into a tightly knit urban fabric, heightening the risk that they will alter estab-

lished patterns of use and interaction. In high-value neighborhoods, residents often have invested heavily—financially and emotionally—in maintaining the character of the area, making them especially sensitive to changes that could undermine its perceived identity or desirability. In both cases, new projects that do not fit in are more likely to be interpreted as threats to neighborhood aesthetics, social routines, and place identity. Consistent with this expectation, we find that the effect of fit is significantly stronger in dense and high-value neighborhoods, whereas in low-density or lower-value areas, where attachments are weaker and land is less scarce, the effect is weak or absent.

***What do respondents infer when a project fits in?***

A common concern in vignette survey experiments is that respondents may draw unintended inferences from the treatment materials (Dafoe, Zhang, and Caughey 2018). This issue is relevant here, as we unobtrusively manipulated whether a residential project is perceived to fit the site by varying its location on a personalized map. The concern is that the decline in nimbyism may be driven not by perceptions of fit between the site and residential projects, but by other inferences respondents draw from the project's placement. To explore what inferences respondents make when there is a fit between project type and site, we present three additional analyses in Figure 9, focusing only on respondents assigned a residential project.

First, we show that the effect of project fit is strongest among respondents who care most about the appearance of their local area—strong local preservationists. These respondents are precisely the ones most likely to react to whether a project aligns with its surroundings, and indeed they respond most negatively to residential projects that clash with the built environment. In contrast, weak local preservationists—those with less concern for their area's aesthetics—do not exhibit less nimby opposition toward residential projects placed at sites where residential projects fit better.[10]

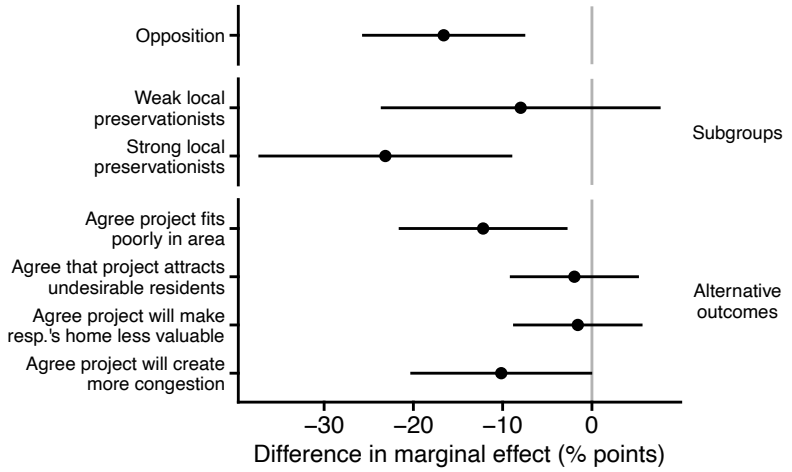
Second, respondents also evaluated several statements about the hypothetical project, including whether "the project will fit poorly into the area." As shown in Figure 9, agreement

[10]While the difference between the two groups of respondents is insignificant at conventional levels when modeled with the trichotomized distance measure, it is significant when modeled linearly.

with this statement is substantially lower for nearby residential projects when they are placed at sites with a better fit. This suggests that our objective indicator of project fit corresponds closely to respondents' subjective perceptions of whether a project fits into the neighborhood.

Third, we find little evidence that respondents draw other inferences from a project's fit with the built environment that could explain reductions in nimby opposition. Being assigned to a residential project at a site better suited for residential development does not significantly affect respondents' beliefs that it "will attract undesirable residents" or, among homeowners, that it "lowers the value of my home." We do find some indication that it increases perceptions that the project "will create more congestion" ($p = 0.05$), which may reflect a concern that changes to the built environment also alter patterns of social interaction.

**Figure 9:** Does the effect of fit between residential project and site depend on local preservationism, and which inferences do respondents make when a residential project fits in?




*Note:* Error bars represent 95% confidence intervals. Dots represent difference-in-difference effects on the outcome of being presented with projects proposed nearby ($\leq$2 km away) contra far away (>6 km away) for housing projects that strongly fit the area versus weakly fit the area. N = 7,425, second estimate only based on weak local preservationists N = 2,313, third on strong local preservationists N = 2,664, and sixth on homeowners N = 5,490. Weighted by the inverse probability that respondents were assigned a project that fits area.

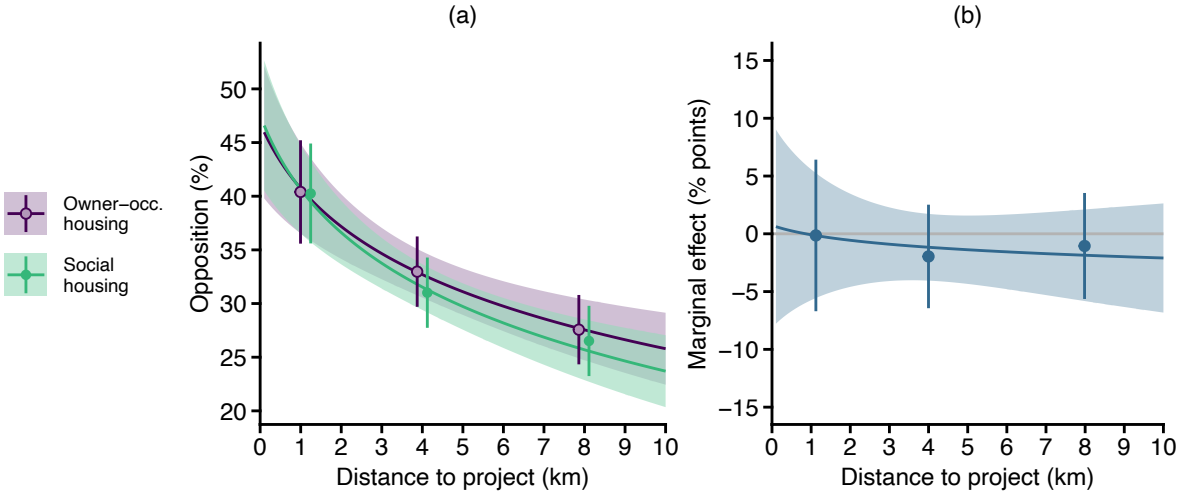
## Limited Evidence for Alternative Explanations

In the final part of our analysis, we use our experiment to explore instances where alternative explanations for nimbyism —such as social exclusion or home value concerns—predict differences in nimbyism, but where the local preservationism explanation expects no differences. First, we explore whether projects that attract outgroups, like low-income people or immigrants,

face more opposition when we hold constant the project's size, and thus its potential to change the neighborhood's physical character. Second, we explore whether homeownership is linked to nimbyism after controlling for factors that might make homeowners more preservationist.

We find no difference in nimby opposition across social and owner-occupied housing. As shown in figure 10, the level of opposition is remarkably parallel for social and owner-occupied housing projects across different distances to the respondent's home.

**Figure 10:** Are citizens more nimby when projects attract poor people and minorities?




*Note:* Error bars and shading represent 95% confidence intervals. N = 5,860.

One might assume that this result reflects the Danish context, where social exclusion may be less salient in a relatively ethnically and racially homogeneous society. However, we show in Online Appendix J that respondents are about 8 percentage points more likely to agree that a social housing project will attract "undesirable residents" than an owner-occupied project if it is placed near their home. Despite this perception, respondents are not more likely to oppose social housing. One potential explanation for this is that some respondents hold liberal-minded preferences for socially heterogeneous neighborhoods or possess anti-exclusionary attitudes, which override potential concerns about these "undesirable residents."

Beyond the possibility of social exclusion, one might suspect that respondents simply wish to keep people out in general—regardless of who they are—due to concerns about congestion. However, our findings offer little support for this interpretation. Levels of nimby opposition to residential projects, which typically bring more people, are comparable to opposition to offices,

public institutions, and retail, which usually attract fewer. Moreover, the overall size of the project—which should be an important factor if congestion were a primary concern—has only a modest effect on opposition. These results are detailed in Online Appendix C and suggest that fears of congestion are not a major driver of nimby opposition in our experiment.

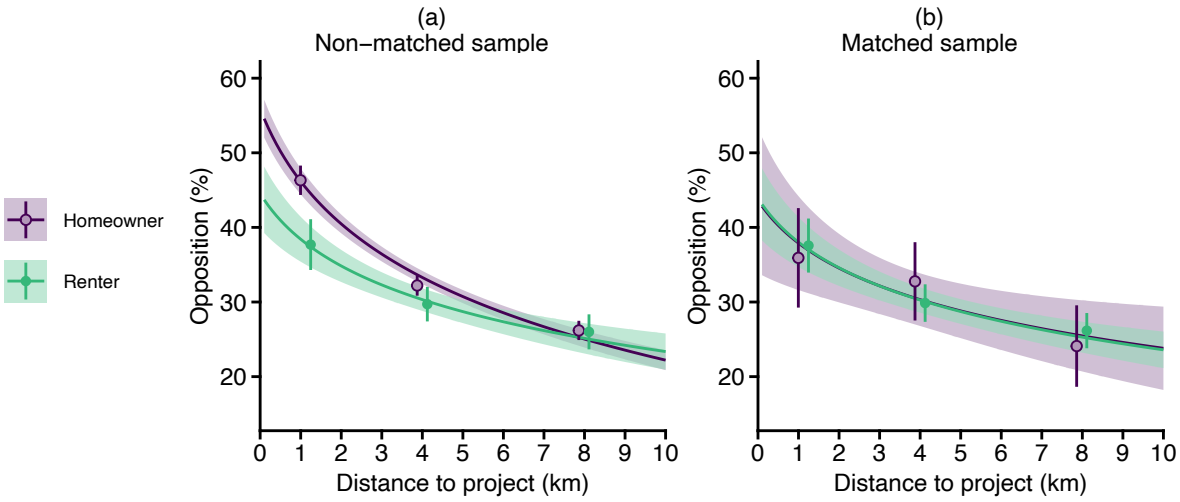
A key prediction of the home value explanation of nimbyism is that homeowners should exhibit more nimby opposition than renters. Consistent with this, the left panel of Figure 11 shows that homeowners are about 9 percentage points more likely to oppose new housing than renters within the first two kilometers. A difference that dissipates at greater distances.

However, the comparison of homeowners and renters is potentially confounded. Homeowners tend to be older, have a higher income, live in single-family homes (as opposed to apartments), and are more likely to live outside big cities. These are all factors that are correlated with local preservationism. But what if we look at demographically similar renters and owners, who are less likely to vary in observed levels of local preservationism? To find out, we match renters and homeowners on some of the most obvious demographic differences between strong and weak local preservationists: age, income, as well as the type of city (urban/non-urban) and home (apartment or single-family home) they lived in. We achieved a satisfactory balance by relying on generalized full matching which was performed using the `MatchIt` package (Ho et al. 2011) in R, which calls functions from the `quickmatch` package (Sävje, Higgins, and Sekhon 2021). For further details on the matching procedure, balance, and sample size, see Online Appendix K. The right panel of Figure 11 shows that differences between renters and owners disappear when we rely on the matched sample. As such, even if some homeowners think that nearby development projects might hurt their home values, they are not more likely to oppose a nearby project than demographically similar renters.

We emphasize that our findings should not be read as evidence that people are indifferent to their home values or to the demographics of their neighborhoods. Prior research makes clear that both matter (Ansell et al. 2022; Fischel 2005; Mummolo and Nall 2017). Moreover, the relatively small number of respondents assigned projects within 1 km limits our ability to detect mechanisms that may operate at a more fine-grained spatial scale. Nevertheless, the evidence

presented here indicates that such explanations are not the primary drivers of nimby opposition to development projects at the neighborhood level.[11]

**Figure 11:** Are homeowners more nimby than renters?




Note: Error bars and the shaded area represent 95 % confidence intervals. N = 23,277. The sample on the right is matched based on the respondent's age, income, dwelling type, and urban/rural. See Online Appendix K for more details.

## Conclusion

This article advances our understanding of an elemental force in local politics—nimbyism—which shapes patterns of economic and racial segregation (Ganong and Shoag 2017; Trounstine 2018, 2020), economic prosperity (Hsieh and Moretti 2019), and the transition to a zero-carbon economy (Sarkodie, Owusu, and Leirvik 2020). We depart from much of the existing literature, which primarily explains opposition to changes in the built environment as a response to concerns about property values or shifting neighborhood demographics. Instead, we argue that nimbyism often reflects a widespread form of local preservationism: a strong, intrinsic preference for maintaining the physical character of one's neighborhood.

We explore the empirical viability of the local preservationism explanation using a large-scale, probability-based survey of Danish citizens that included a factorial vignette experiment in which participants evaluated a hypothetical development project. As a methodological innovation, we placed the project in each participant's own neighborhood, providing personalized

[11]For home values, this is further corroborated by additional tests in Online Appendix L, which compare homeowners with varying levels of economic exposure to price shocks.

maps that showed the project's location. By linking these maps to administrative data on the local built environment, we gathered information on the types of buildings near the proposed site. This allowed us to assess how well the project fit with its surroundings.

Analyzing the survey responses, we find that local preservationism is widespread: most people care about the appearance and physical character of their local area. We show that individual-level variation in local preservationist attitudes moderates the degree of nimby opposition to development projects. Leveraging random variation in the placement of the hypothetical projects, we find that citizens are more accepting of new residential development when it better fits with the existing built environment. Analyzing non-residential projects, we show that this pattern is not driven by general differences in development-friendliness across locations, but by the match between project and site characteristics. Finally, consistent with the idea that nimbyism is driven more by concerns about physical change than by property values or social exclusion, we find no difference in opposition between social housing and other types of housing, or between homeowners and renters, when holding building type and respondent demographics constant.

A potential limitation of our study is that individuals facing a real development project might behave differently than respondents evaluating a hypothetical scenario. To minimize this concern, we used a sample drawn from the general population rather than professional survey takers, contacting individuals via their official government email—an account they also use to receive notifications about local planning processes and public hearings. We also took several steps to reduce experimenter demand effects, manipulating both the project's distance and its fit with the built environment unobtrusively through the personalized map. Moreover, prior research suggests that respondents' behavior in vignette survey experiments tends to mirror their real-world actions (Hainmueller, Hangartner, and Yamamoto 2015), and that reactions to hypothetical and actual scenarios are often comparable (Brutger et al. 2023).

We believe our findings have relevance beyond the Danish context. Denmark's relative cultural homogeneity and income equality make it a least-likely setting for opposition driven by social exclusion or concerns over property values, and thus particularly well-suited for isolating sincere preservationist motivations. While the limited role of such factors in our study may not

generalize to contexts with longer histories of ethnic diversity, racial segregation, or sharper economic inequalities, there is good reason to expect that preservationist motives operate there as well, alongside other mechanisms.

Another limitation is that our design focuses on variation at the neighborhood scale, with our "nearby" category defined as less than two kilometers from the respondent's home. This aligns with the spatial scale used in other survey experiments exploring nimbyism, but it does not capture hyper-local processes—such as block-level opposition—that could activate other mechanisms, including concerns about changes in the ethnic or socioeconomic composition of one's immediate surroundings.

Our study opens several avenues for future research. One concerns what kinds of alignment with the built environment reduce nimby responses. We operationalize alignment narrowly—as similarity to surrounding buildings in age and use—but there are likely many other ways a project might 'fit in.' Our indicator should therefore be seen as one practical starting point, not a definitive template. Relatedly, it could be interesting to study whether certain architectural design philosophies that take the existing built environment as a starting point—such as contextualism— generates less nimby opposition. Another direction for future research is to study how local preservationism operates outside the housing domain. The same place-protective motivations may influence citizen responses to visible physical changes in areas such as public space redesign, climate adaptation measures, or new transportation infrastructure. Finally, further refinement of the preservationism index is needed. Our current measure captures both aesthetic and lived-experience dimensions; future work could include items that more explicitly measure perceptions of neighborhood distinctiveness, place-based nostalgia, or sensitivity to disruptions in everyday use, allowing clearer distinctions between preservationist attitudes and related forms of place attachment.

Our findings also carry several implications for housing policy. We show that compatibility with the existing built environment attenuates opposition to new projects. This may help explain why it is difficult to expand housing in established neighborhoods, where new buildings are less likely to 'fit,' and why development often occurs in newly developed areas, such as through suburban sprawl or the conversion of harborfront and light industrial sites, where there

is no established neighborhood character to compromise. Beyond explaining these patterns, our results also have direct implications for advocates of urban growth. For one, they suggest that allowing neighborhoods to 'settle' makes later development harder, whereas maintaining a degree of ongoing change may ease future construction. In the same vein, clustering new housing near other recent housing appears less likely to provoke opposition than dispersing projects across many areas.

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December 11, 2025.

# Online Appendix

# Understanding Nimbyism as Local Preservationism

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## *A Personalized Maps*

We created the personalized maps using information from the Danish population registers provided by Statistics Denmark. We did this in three steps.

1. **Identifying addresses.** We geocoded each respondent's home address using DAWA (Danmarks Adressers Web API), which is based on official Danish address data and maintained by the Danish Agency for Data Supply and Infrastructure. We were unable to locate the addresses of 98 respondents, who were excluded from the analyses, along with those with invalid or protected addresses. We cannot account for respondents who may have moved between the sample selection and data collection stage, but we believe this group is small given the short interval between these stages.

2. **Project Location** We used the location of the respondent's home to generate coordinates for the hypothetical development project. We began by assigning each respondent a distance from their home to the project through a simple random assignment of integers from 1 to 10. Next, we created a "donut" centered on the respondent's home, with an outer radius equal to the assigned distance $d$ and an inner radius of $d-1$ km less. We then intersected this donut with a modified shapefile of the municipality where the respondent lived. The shapefile was modified to ensure that the project could not be placed on uninhabited areas like sandbanks, lakes, or similar features that would reduce the realism of the treatment. We select a random point within this polygon as the project location. In some cases, no valid points were available within the polygon because the donut and the municipality shapefile did not intersect. This often occurred when respondents lived on an island or in a small municipality. For these respondents, we assigned a new distance, excluding distances equal to or greater than the initially assigned distance. We repeated this process until we successfully identified a location for the development project. As a result, there was a somewhat uneven distribution of distances among respondents, with more receiving maps featuring shorter distances. This may introduce selection bias in the estimates. To address this, we controlled for a set of dummy variables representing the distances that each respondent was unable to be assigned to.

3. **Creating the Map.** We used the information about the location of the hypothetical development project to generate a map for the respondent. The map combined two elements; 1) a semi-transparent red dot with a radius of 300 m, which was placed on the site of the development project, and 2) a background map provided by The Danish Agency for Data Supply and Infrastructure, which is designed to present information to citizens about infrastructure, tourism and other issues at the municipal level. The size was 8 x 8 km and was centered on the development project. Thus, all respondents who received a development project that was less than 4 km from their home would be able to locate their own home on the map.

We illustrate this three-step procedure in Figure A1. Once the process was complete, we conducted a thorough quality check of all 86,549 maps (we also created maps for the sampled respondents who did not participate in the survey). This included automated checks for issues such as internet connection failures, background map downtime, and other similar problems. As a result, the quality of all maps was consistent.

### *B Unequal Assignment to Distance Treatment*

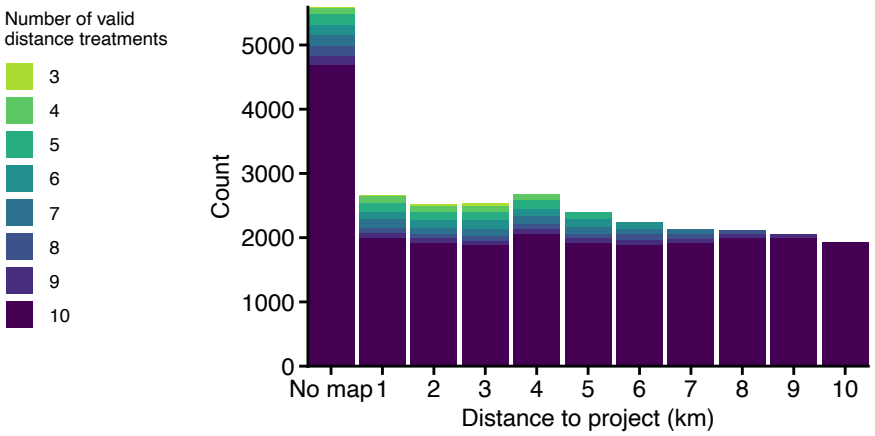
We could not employ simple random assignment to the distance between the respondent's home and the project location due to differences in the geographic environment. As described in Appendix A, the procedure we employed led to a somewhat uneven distribution. This distribution of respondents to different distances is illustrated in figure B1. The dark purple bars in the figure signify respondents who could be assigned to all potential distances, whereas the blue and green bars signify respondents who could be assigned to fewer treatments. As can be seen from this figure, respondents who could only be assigned shorter distances are overrepresented at shorter distances.

Does this influence our estimate of nimby opposition? Figure B2 shows how the effect of distance on opposition varies depending on whether and how we take the unequal assignment to the distance treatment into account. In all models presented in this paper, we rely on our main specification, presented in panel (a), where we include a dummy variables for whether the respondent could be assigned to a particular distance. A second approach would be to exclude these respondents (b), do nothing about the unequal assignment (c), or include an interaction

**Figure A1:** How did we create the personalized maps?

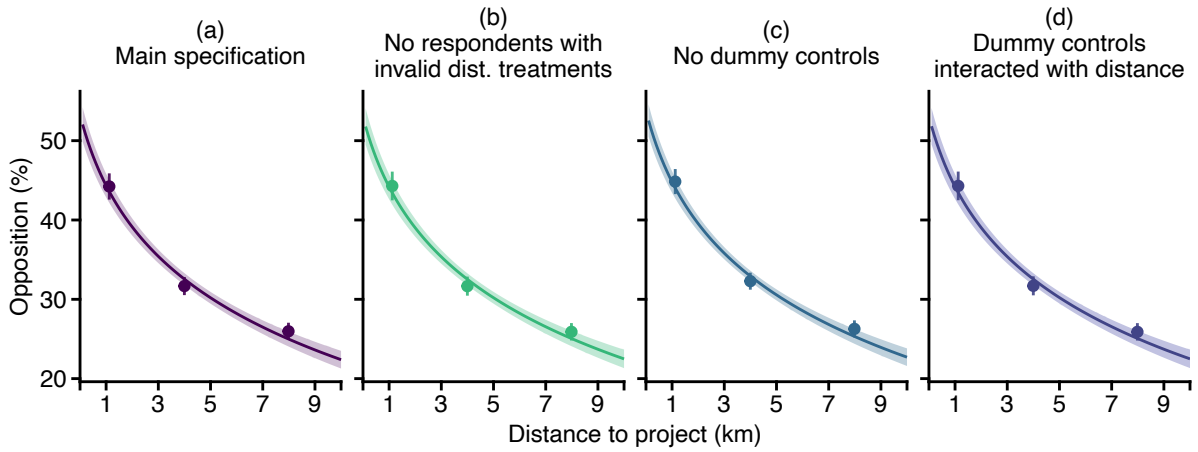

*Note:* (1) Locate the respondent's home, (2) create a donut around the respondent's home with a random radius, (3) intersect donut with municipality shapefile, (4) select a random point inside intersection for development project, (5) zoom to development project and create site area as circle with 300 m in radius, (6) remove irrelevant objects from map.

**Figure B1:** Potential distances respondents could be assigned conditional on the distances they were actually assigned.




between the dummies and distance (d). All of these approaches return the same basic estimate of nimbyism. As such, the unequal assignment do not appear to influence the results.

**Figure B2:** Do unequal assignment to treatment affect the association between distance and opposition?



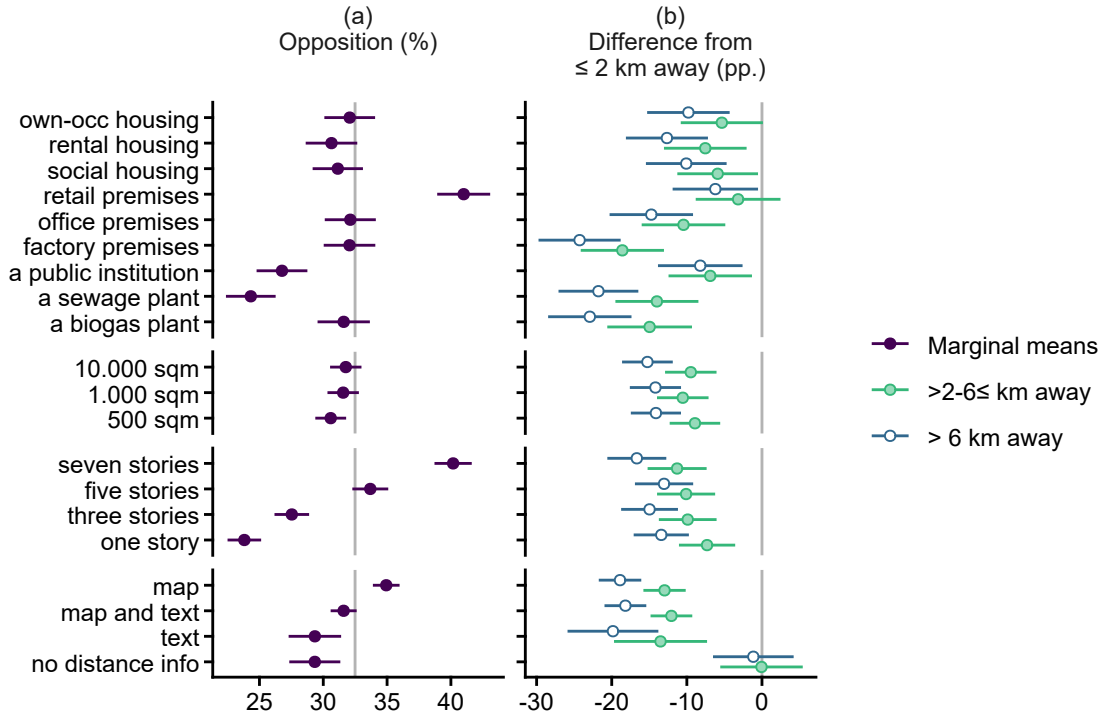

*Note:* Error bars and the shaded area represent 95 % confidence interval.

## *C Marginal Means of Vignette Attributes and Conditionality of Nimbyism*

The left panel of Figure C1 plots the marginal mean opposition to the development project across different project types, heights, sizes, and the different ways of getting informed about the distance to the project. The right panel shows the difference in the opposition towards the project between projects that are proposed 2 km or less away from the respondent's home and projects that are proposed further away from the respondent's home. It is striking how consistent nimbyism is across different project attributes. On average, opposition to development

projects is about 17 percentage points higher when the project is proposed within 2 km of the respondent's home rather than more than 6 km away.

**Figure C1:** How do development attributes affect opposition, and are these effects conditional on the distance from respondents' homes?




*Note:* Error bars represent 95% confidence intervals. N = 28,850. The reference category in the right panel is development projects proposed less than 2 km away from resp.'s home. All respondents were assigned a distance, but the "no distance info" group was not shown this information.

## *D Some Alternative Distance Measures*

One in ten respondents received no information about the distance between the project and their home. However, they were still assigned unobserved distances. The analysis in Model 1 of Table D1 reassuringly, show that these assigned distances only influenced opposition when the distance was revealed to the respondents.

In the main analysis, we use both binned distances, and the logarithmic transformation of the measured distance between the development project and the respondent's home to identify nimbyism. This modeling approach allows us to take into account that the effect of geographically bounded objects decays non-linearly with distance (see e.g.: Gravelle, Medeiros, and Nai 2021, 102499). They are also the models that best fit our data. However, as we show in Table

D1, we also identify a great deal of nimbyism if we use subjective travel times as well as the non-logged distance.

**Table D1:** Distance availability and alternative operationalizations of distance between development project and respondents home.

| Model: | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| Constant | 0.33** (0.04) | 0.50** (0.05) | 0.42** (0.05) | 0.43** (0.05) | 0.38** (0.05) |
| log(1 + Distance) | -0.02 (0.02) | -0.13** (0.006) | | | |
| Distance information available | 0.20** (0.04) | | | | |
| log(1 + Distance) × Distance information available | -0.11** (0.02) | | | | |
| Distance (km) | | | -0.02** (0.001) | | |
| [0-2] km | | | | ref | |
| ]2-6] km | | | | -0.13** (0.010) | |
| ]6-10] km | | | | -0.18** (0.01) | |
| Estimated travel time (min) | | | | | -0.0006** (0.00010) |
| R2 | 0.024 | 0.027 | 0.024 | 0.023 | 0.004 |
| RMSE | 0.463 | 0.463 | 0.464 | 0.464 | 0.469 |
| Observations | 28,850 | 26,002 | 26,002 | 26,002 | 26,002 |

*Note:* The dependent variable is opposition to the development project. †p $<$ .10; *p $<$ .05; **p $<$ .01.

## *E Getting Data on the Built Environment Near the Project Site*

To link hypothetical development projects to the local built environment we draw on data from the Danish Building and Housing Registry (Bygnings- og Boligregistret, BBR). BBR is a nationwide register of all buildings and housing. Among other things, the register contains information on all buildings in Denmark, their location, building materials, when they were built, and much more. Property taxes, grants to municipalities, mortgages, and property sales depend on the information in the register, and several stakeholdes thus have a vested interest in keeping the information in the registry as accurate as possible. An example of the level of detail in the register is that it records information on the roofing material of even small outhouses in

enclosed yards intended for bicycles and garbage collection. The data is publicly available and can be accessed through datafordeler.dk.

We filter the data from BBR extensively to only include information on buildings that were erected (Statuskode: '6 - Opført') as of the first day of data collection (VirkningFra: '2023-06-07' and VirkningTil: '2023-06-08'). Furthermore, we remove all smaller buildings used solely for parking, storage, etc. (Anvendelseskode: >'900'). This leaves us with data on a total of 2,549,349 buildings.

To subset on the buildings near the project site, we first locate the project site (i.e., the red dot) presented to each respondent. Next, we identify the buildings at the site. We then verify whether the site meets our three criteria for whether a new residential project has a stronger fit with the built environment, i.e., the site must include more than five buildings, one of the buildings must have been built in 1992 or later, and one building's primary use must be residential (Anvendelseskode: '[100-190]').

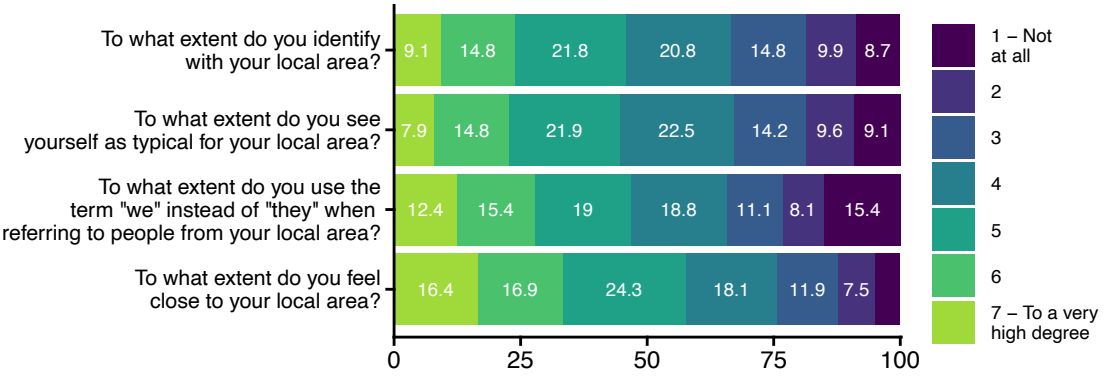
### *F Nimbyism and Place-Based Attachment*

Is nimbyism influenced by other indicators of place-based attachment beyond local preservationism? To explore this, we examine whether the level of nimby opposition depends on social identification with one's local area and whether it varies between respondents living in their preferred municipality and those who do not.

We construct an index to measure respondents' identification with their local area using four items adapted from previous measures of place-based social identity (Huddy and Khatib 2007). The items form a reliable index with a Cronbach's alpha of 0.87. We combine the four items by summing their scores, with missing responses imputed using the item mean. Respondents scoring at or above the median (0.69) are considered to identify strongly with their local area, while those scoring below the median are considered to identify weakly. The wording of the four items and their distribution are shown in figure F1.

As can be seen in figure F2, identifying with the local area does not seem to condition respondents' nimbyism. Compared to respondents with weak local identification, respondents with strong local identification are about 2-4 percentage points more likely to oppose local development projects at any distance from their home.

**Figure F1:** How much do our respondents identify with their local area?




*Note:* Descriptive shares are weighted by respondents' probability of being sampled for the survey and non-response rates to match the joint distribution in the Danish population for age, gender, and education.

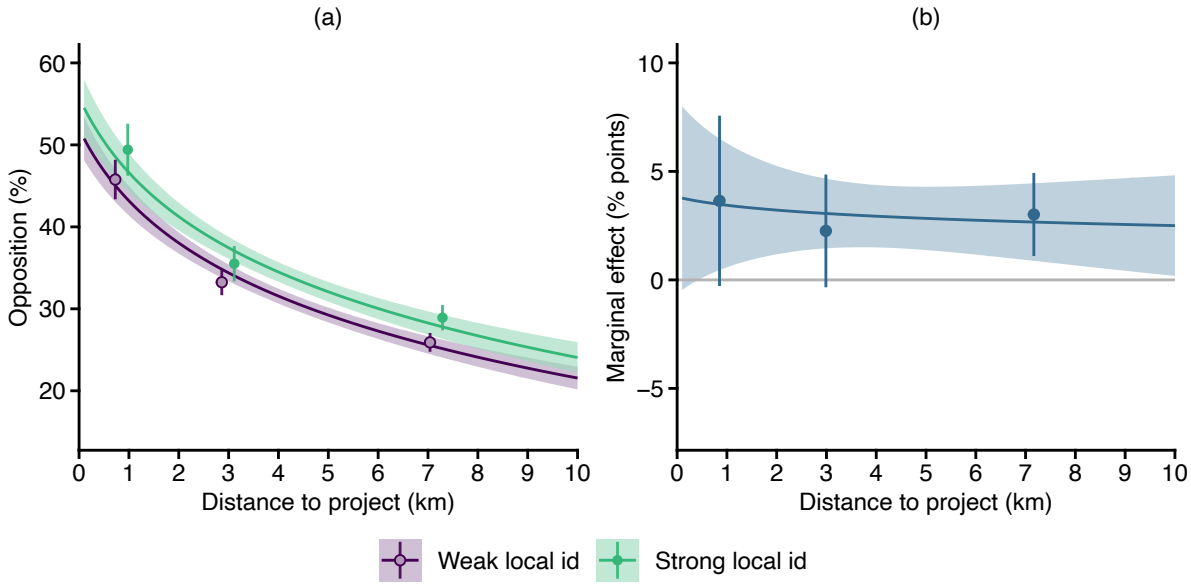
To measure whether respondents live in their preferred municipality, we ask them which municipality they would choose if they were not constrained by practicalities or affordability, and recorded whether this matched their current residence. As shown in figure F3. There is some evidence that those who live in their preferred municipality are more nimby, however, the differences are not statistically significant.

Table F1 directly compares our different indicators of place-based attachment, including the local preservationism index for reference. To ensure a fair comparison, we use median splits for both local identification and local preservationism. We find a statistically significant interaction between distance and strong local preservationist sentiment, indicating that nimbyism is more pronounced among those with high local preservationism. In contrast, strong identification with the local area and living in one's preferred community do not significantly or substantively reduce levels of nimbyism.

### *G Robustness to Varying Operationalizations of Our Fit Indicator*

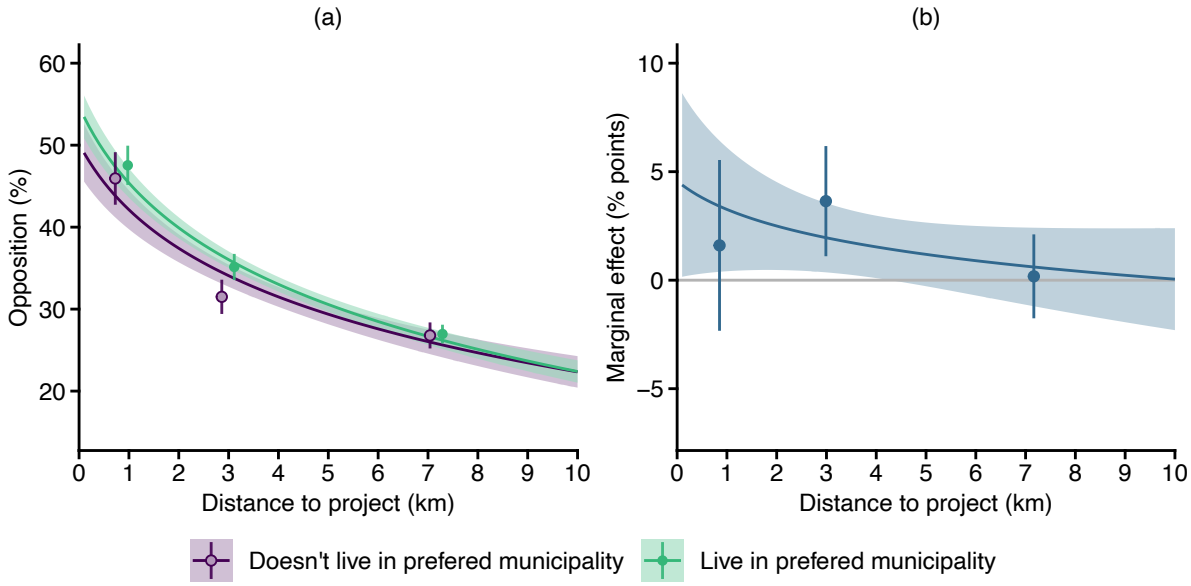
Fitting into the built environment is inherently a multi-dimensional concept which require the consideration of various factors. As such, a project might fail to align with the built environment for several reasons. It might be surrounded by older buildings, it might be located in an industrial area, or it might be sitting on open land. A mismatch in any one of these dimensions, or others, can make an otherwise suitable project a worse fit. As a result, if we were to evaluate fit based on just one of these factors it may provide us with a limited understanding of nimbyism, as many projects that meet one criterion may fail on another.

**Figure F2:** Does place-based identification condition nimbyism?




Note: Error bars and the shaded area represent 95% confidence intervals. Respondents strongly identify with their local area if their score on the local identification index is at or above the median on the index (.69), and weakly identify if they are below the median. N = 26,002.

**Figure F3:** Does living in preferred municipality condition nimbyism?




Note: Error bars and the shaded area represent 95 % confidence intervals. Respondents live in their preferred municipality if they answer the question "If you could choose, which municipality would you prefer to live in?" with the municipality they currently live in, and not in their preferred municipality if they answer any other municipality. N = 26,002

This complexity is reflected in figure G1, where we plot differences in opposition to the project across each of the three criteria that in combination make up our indicator of whether a residential projects fits in more strongly. While respondents tend to favor projects that meet

**Table F1:** Place-based attachments and nimbyism

| Model: | Preservation | Identification | Residence |
|---|---|---|---|
| Constant | 0.50** (0.01) | 0.55** (0.01) | 0.54** (0.01) |
| log(1 + Distance) | -0.12** (0.007) | -0.13** (0.006) | -0.13** (0.009) |
| High local preservationist sentiment | 0.11** (0.02) | | |
| log(1 + Distance) × High local preservationist sentiment | -0.02* (0.01) | | |
| Strong local identification | | 0.01 (0.02) | |
| log(1 + Distance) × Strong local identification | | 0.01 (0.01) | |
| Live in prefered municipality | | | 0.01 (0.02) |
| log(1 + Distance) × Live in prefered municipality | | | 0.004 (0.01) |
| R2 | 0.031 | 0.025 | 0.024 |
| RMSE | 0.469 | 0.47 | 0.471 |
| Observations | 26,002 | 26,002 | 26,002 |

*Note:* The dependent variable is opposition to the development project.
†p $<$ .10; *p $<$ .05; **p $<$ .01.

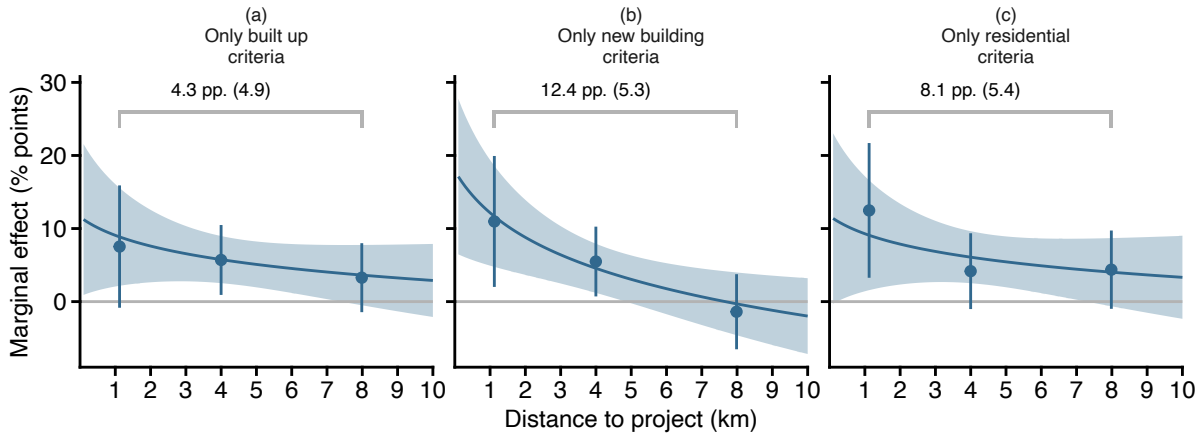
individual criteria (with estimates above 0), the moderating effect of meeting each individual criterion in isolation is weaker than meeting them all.

As we show in our main analysis, we do find a strong moderating effect when we combine all three criteria. Importantly, this finding does not depend our exact definition of these three criteria. As can be seen in Figure G2, we consistently find that nimbyism is lower for projects that fit in, even if we make adjustments to these definitions. In all cases, we find that there is a substantial and statistically significant difference in opposition depending on whether a project fits in near the respondent's home, and no significant difference around 8 km away, however, the difference-in-difference estimates are not all statistically significant.

### *H Effect of Fit Indicator Conditional on the Height and Size of the Development*

Below, we demonstrate how the effect of project fit on nimbyism is affected by characteristics of the development beyond its age and type by examining how results vary with project size and height. We do not include these aspect of the projects or the site when we test whether nymbyism is affected by how well the project fit in to the built environment in the main analysis. This

**Figure G1:** To what extent do the constituent components of our fit-indicator condition nimbyism?

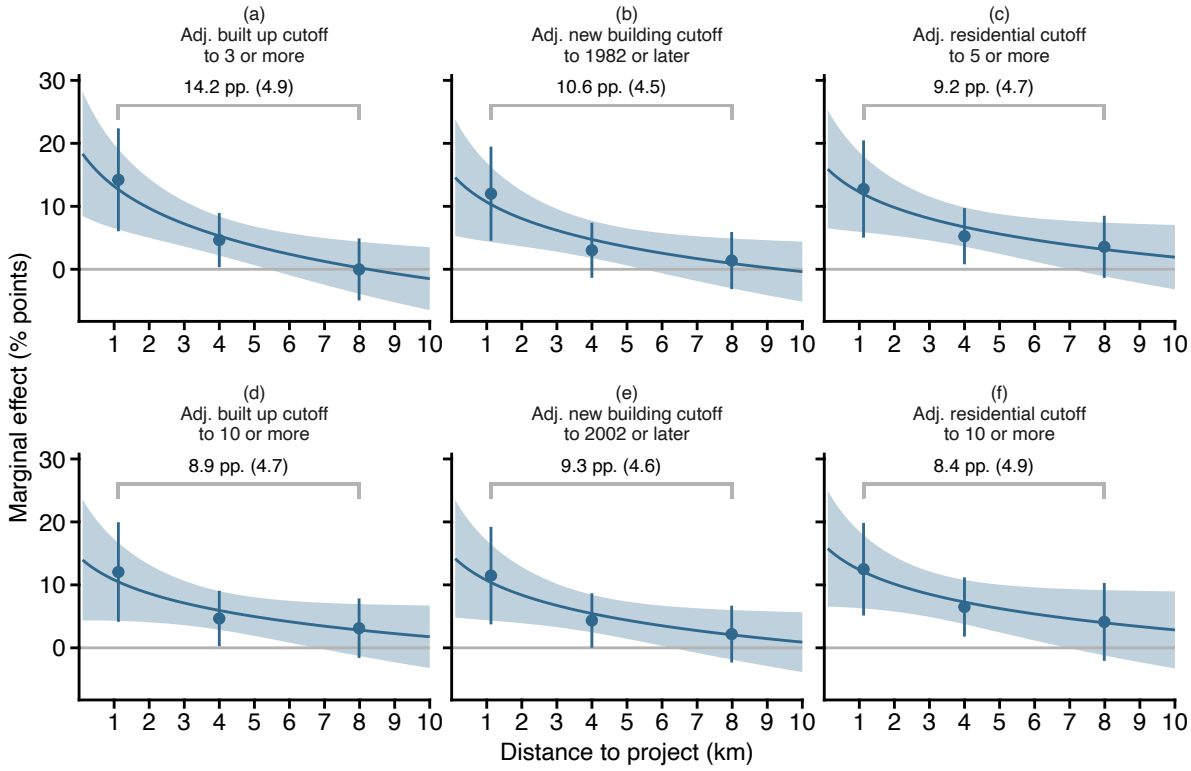



*Note:* Error bars and shading represent 95% confidence intervals. Weighted by the inverse probability that respondents were assigned a project that had a stronger fit. The operationalization of the fit indicator varies across subplots. The definitions are all based on the buildings present in the project area. Left: 5 or more buildings (N = 7,688), center: 1 or more buildings constructed after 1992 (N = 7,680), right: 1 or more buildings designated as residential (N = 7,714),

is not because we believe these criteria are unimportant, but rather because that the empirical setting of Denmark provide few sites where tall buildings and large projects could be classified as fitting in. Apartment buildings constitute less than 5 percent of all housing in Denmark, and more than 85 percent of all residential buildings are less than 175 square meters. Incorporating height and size into our primary fit measure would therefore risk turning the analysis into a comparison of opposition to large versus small projects.

Nevertheless, the size and height of the project still allow us to further test the robustness of our findings. By modifying certain characteristics of a proposed project, we manipulate how effectively our operationalization of ”fit” distinguishes between sites where residential projects fit better and worse. As a result, we would expect nimbyism to decline more noticeably for single-story or smaller developments when they are placed at sites where residential projects fit better. However, the size and height of the project can also affect opposition to the project independently of its proximity to a respondent's home—potentially reducing nimbyism simply by increasing opposition across all distances. Therefore, it is important to account for the baseline level of opposition to the type of project being considered, when evaluating these findings.

**Figure G2:** To what extent does the moderating effect of our fit-indicator depend on how we define the three underlying criteria?

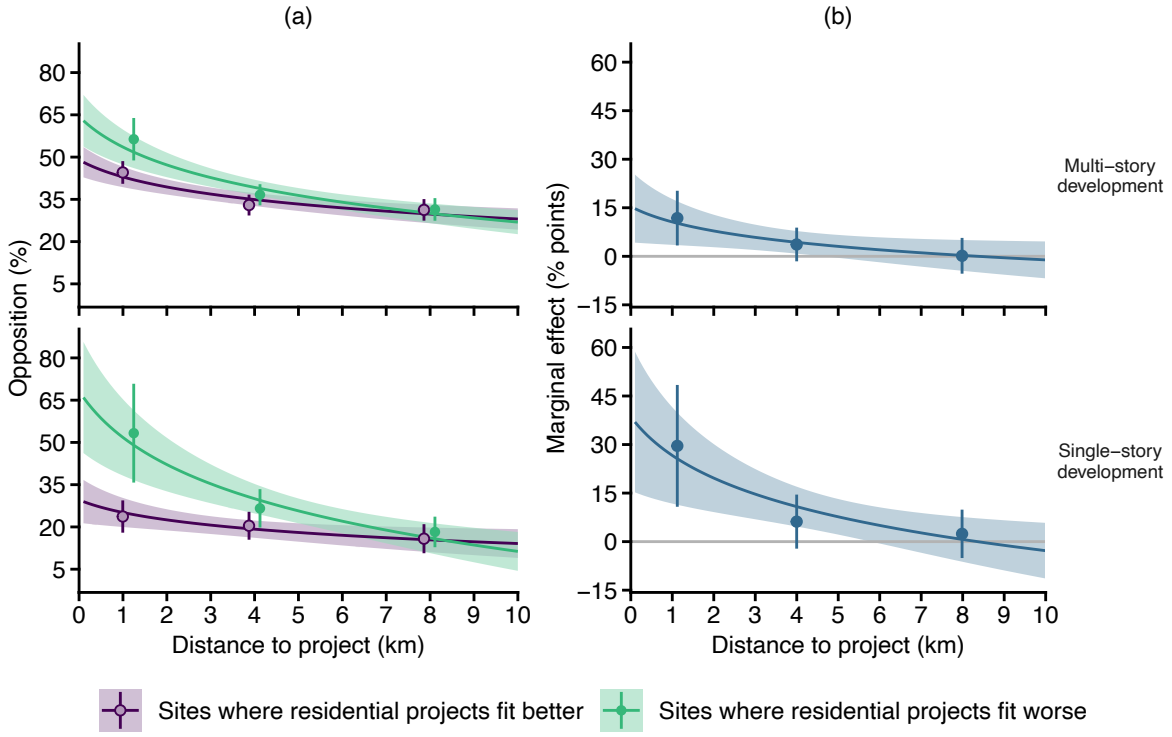



*Note:* Error bars and shading represent 95% confidence intervals. Weighted by the inverse probability that respondents were assigned a project that had a stronger fit. The operationalization of fit varies across subplots. The definitions are all based on the buildings present in the project area. Top left: 3 or more buildings, 1 or more buildings constructed after 1992, and 1 or more buildings designated as residential (N = 7,731), bottom left: 10 or more buildings, 1 or more buildings constructed after 1992, and 1 or more buildings designated as residential (N = 7,727), top center: 1 or more buildings constructed after 1982, 5 or more buildings, and 1 or more buildings designated as residential (N = 7,724), bottom center: 1 or more buildings constructed after 2002, 5 or more buildings, and 1 or more buildings designated as residential (N = 7,738), top right: 5 or more buildings designated as residential, 1 or more buildings constructed after 1992, and 5 or more buildings (N = 7,744), bottom right: 10 or more buildings designated as residential, 1 or more buildings constructed after 1992, and 5 or more buildings (N = 7,742).

Both these mechanisms seem to be at play when we analyze multi-story developments (3+ stories) and single-story developments separately as shown in figure H1. Opposition to multi-story developments is about 19 percentage points higher across all distances. This reduces nimbyism for multi-story developments, as the effect of distance on opposition is limited by how well the project is perceived independently of its distance from the respondent. However, in addition our conceptualization is also better at distinguishing sites where single-story developments would fit well in, as a better fitting site reduces nimbyism by 77 percent for single-story developments and 47 percent for multi-story developments. While the difference

in the effect of fitting in across single- and multi-story buildings is statistically insignificant ($p = 0.14$), this analysis provides suggestive evidence that fitting in is less important for taller residential developments. This makes sense, as single-story developments are highly likely to fit the height at the proposed site, while that is not the case for multi-story developments. Thus the conceptualization is worse at identifying sites where tall residential projects would fit better in.

**Figure H1:** Does whether a residential development project fit into the local area condition nimbyism differently for single-story or multi-story development projects?

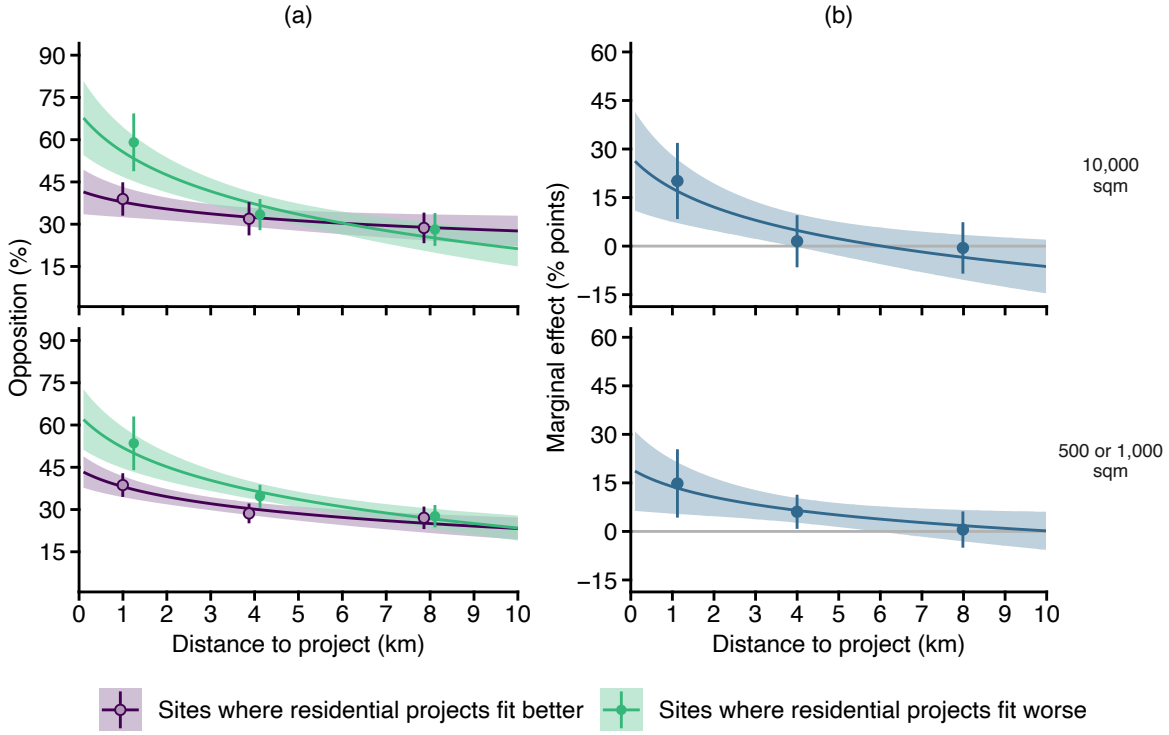



*Note:* Error bars and shading represent 95% confidence intervals. N = 7,425, Single-story N = 1,907, Multi-story N = 5,518. Weighted by the inverse probability that respondents were assigned a project that fit the area.

When we analyze the smaller residential projects (500 or 1,000 sqm) separately from the largest residential projects (10,000 sqm), we do not see that the overall level of support for the project change much. The extend of nimbyism is thus largely the same across these two subgroups. The largest difference we observe between the two subgroups is that our respondents are about 5 percentage points more opposed to the larger residential projects than to smaller residential projects that are proposed nearby at a worse fitting site. This difference suggest that our conceptualization of better fitting sites is better at identifying sites where larger projects

will stick out. This may be due to that such a large developments are especially disruptive in areas that are not built up (less than five buildings). Nevertheless, the difference in the reduction in nimbysism is statistically insignificant, and in both cases our conceptualization of better fit reduces nimbyism by about 60 percent.

**Figure H2:** Does whether a residential development project fit into the local area condition nimbyism differently for smaller or larger development projects?



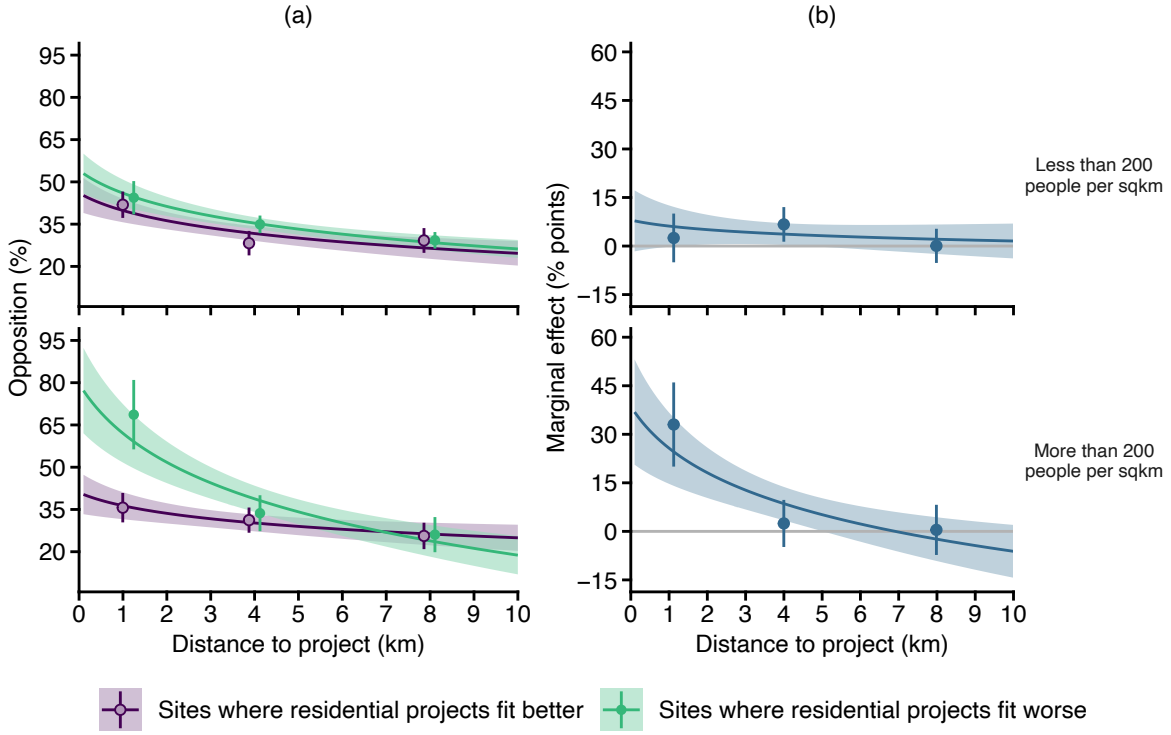

*Note:* Error bars and shading represent 95% confidence intervals. N = 7,425, 10.000 sqm. N = 2,461, 500 or 1.000 sqm. N = 4,964. Weighted by the inverse probability that respondents were assigned a project that fit the area.

## *I Effect of Fit Indicator Conditional on Neighborhood Characteristics*

In the main analysis, we emphasized the interaction between features of the built environment at the project site and characteristics of the proposed project when testing how project fit affects nimbyism. However, we also expect that this match matters more in areas where there is a lower overlap between features of the built environment at the project site and features of the built environment elsewhere in the local area, as it in these areas that a counterfactual site location in the community would be worse, while that is not as likely in areas where there is a larger overlap between features of the site and the surrounding neighborhood. We present two pieces of evidence that suggest this is the case.

First, given our particular conceptualization of sites where residential projects fit better, we would expect the overlap between features of the built environment at the project site and features of the built environment elsewhere in the local area to be smaller in high-density rather than low-density neighborhoods. In high-density neighborhoods, locating a project in one of the few places that has not already been built up would limit peoples access to open spaces and could thus be quite disruptive to the way people use their local area. In contrast, we expect that the difference between sites where the criteria are fulfilled and those where they are not is less pronounced in rural communities. That is also what we see in Figure I1, that shows that the fit criteria have a strong conditioning effect on nimbyism in high-density zip codes, while mattering much less in low-density zip codes. The difference in the effect of fitting in between high-density zip codes and low-density zip codes on nimbyism is both statistical significant ($p = 0.005$) and substantial.

**Figure I1:** Does whether a residential development project fit into the local area condition nimbyism differently in low density or high density areas?




*Note:* Error bars and shading represent 95% confidence intervals. N = 7,424, Less than 200 people per sqkm N = 4,616, More than 200 people per sqkm N = 2,808. Weighted by the inverse probability that respondents were assigned a project that fit the area.

Second, we also expect that residents in neighborhoods with higher home values would be more attentive to our particular conceptualization of sites where residential projects fit better. As the quality of neighborhood amenities are better in expensive neighborhoods, we expect that the perceived difference between a site that lives up to our conceptualization of sites where residential projects fit better and those that do not is more pronounced than in less expensive neighborhoods. As we show in figure I2, this seem to be the case. Among respondents residing in zip codes with sqm. price i Q2 of 2023 of more than 14K DKK (median among our respondents, equivalent of about 2K USD) opposition is reduced by about 25 percentage points more between locations close by ($\leq$2 km away) and far away ($>$6 km) for residential projects that are located at sites where residential projects fit better in than at sites where residential projects fit worse. In contrast, we do not see a similar conditioning of characteristics of the site location for respondents that reside in zip codes with sqm. price less than 14K DKK, a difference between zip-codes that is statistical significant ($p = 0.003$).

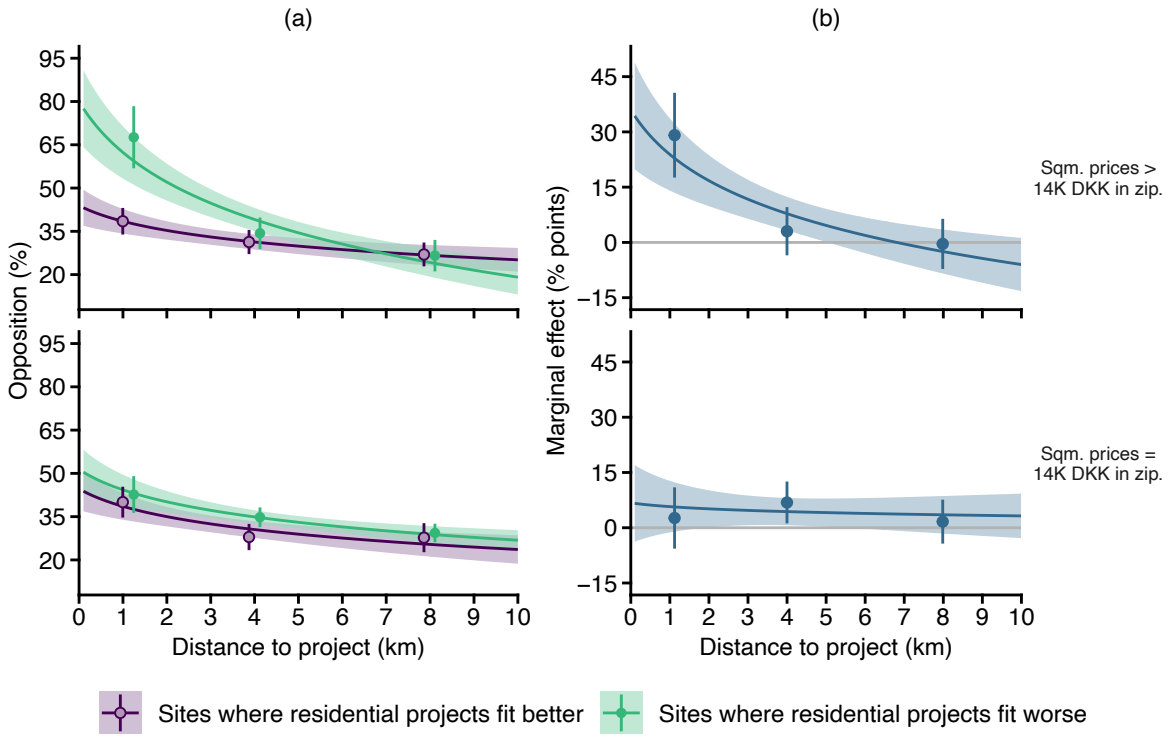
Together, these findings underscore the context-specific nature of what it means for a development project to fit in with its surroundings. Thus, while our criteria seem highly relevant for differentiating between sites where residential projects will fit better in areas usually associated with the housing crisis (urban areas with high square meter prices), they seem less useful in rural areas.

### *J Perceived Consequences of the Development Project*

After presenting respondents with the proposed project, we asked several questions about what they believe might happen to them and their neighborhood if the project were approved by the city council. In the main analysis, we use their responses to one of these questions to evaluate whether our fit-indicator moves respondents' assessment of whether the projects fit in. Below, we report on some of the additional consequences we asked about, particularly those related to demographic changes and changes in home values. This analysis also contextualizes the findings related to the home value and social exclusion explanations we discuss in the final part of the analysis.

We find that respondents are more likely to agree with the statement "the project will attract undesirable residents to my neighborhood" when the project in question is social housing than

**Figure I2:** Does whether a residential development project fit into the local area condition nimbyism differently in areas with high and low sqm. prices?

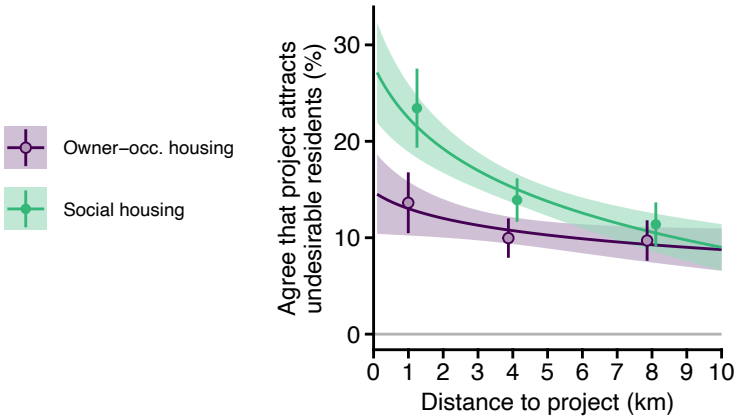



*Note:* Error bars and shading represent 95% confidence intervals. N = 7,398, sqm. prices $>$ 14K DKK in zip N = 3,738, sqm. prices $\leq$ 14K DKK in zip N = 3,660. Weighted by the inverse probability that respondents were assigned a project that fit the area.

when the project is owner-occupied housing, as shown in figure J1. However, as we show in the main analysis, this does not translate into changes in the differences in opposition to the project.

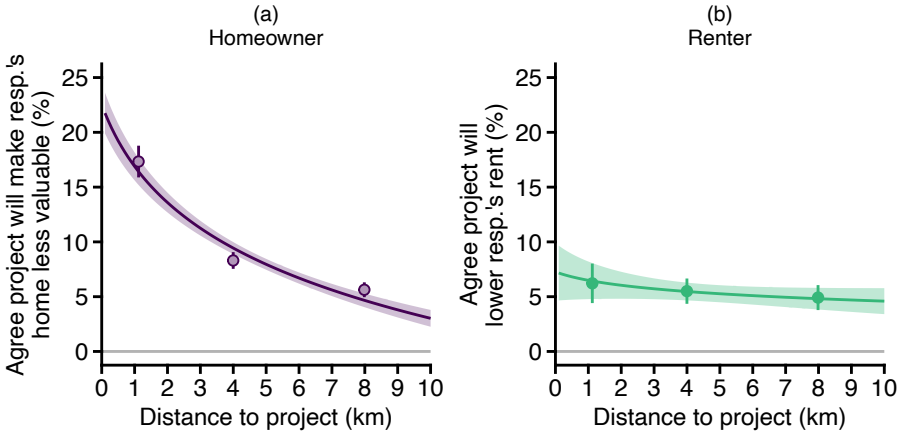
What about the economic impact of the development project? We asked homeowners whether they agreed or disagreed that "the project will make my home less valuable." Consistent with a home value explanation of nimbyism, we find that homeowners are more likely to agree with this statement when the proposed project is located closer to their home, as shown in figure J2. However, it is striking that relatively few homeowners think that the project will make their home less valuable. Even among those near the project ($< 2km$) it is only 17 percent. We also asked renters whether they thought their rent might decrease as a result of the new project, but very few renters at any distance expected their rent to decrease as a result of further development in their local area.

**Figure J1:** Does manipulating the development type change resp.'s perception of which new residents the project will bring?




*Note*: Error bars and the shaded area represent 95 % confidence intervals. N = 5,860.

**Figure J2:** Do homeowners and renters differ in their perceptions of the economic impact of the development project?




Note: Error bars and the shaded area represent 95 % confidence intervals. Homeowners N = 19,259 and Renters N = 5,934.

## *K Matching Procedure*

The initial sample of respondents that were assigned to a distance treatment, and had non-missing responses on all the matching covariates consisted of 17,651 homeowners and 5,626 non-homeowners. Homeownership was determined based on the respondent's response to the question "What best describes your housing situation?". Respondents who indicated they were living in "owner-occupied housing" or were "owners of a co-op" were categorized as homeowners. The remaining respondents were coded as non-homeowners.[1]

1. Respondent's living in dormitories were excluded from this analysis.

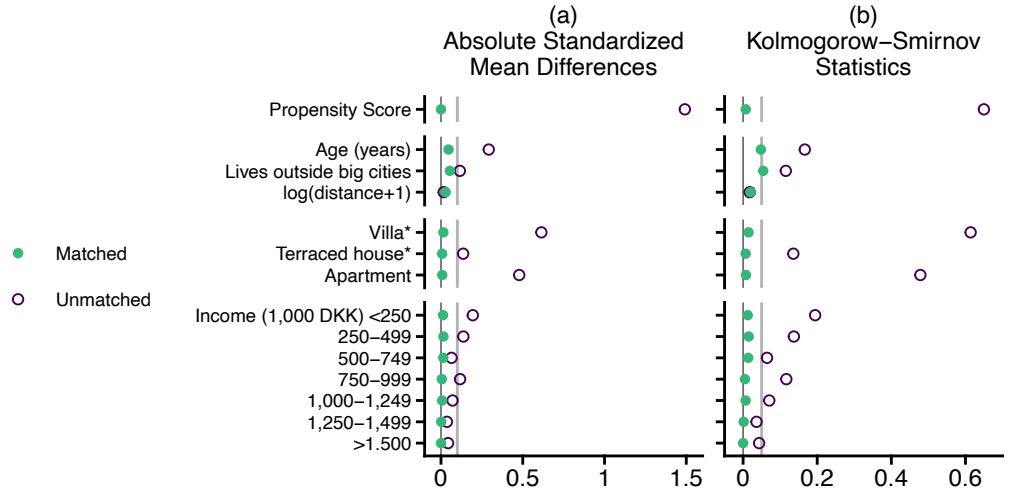
We perform matching on four variables: the respondent's age in years, self-reported household income (pre-tax) coded into seven categorical intervals of 250,000 DKK, housing type coded as either 'Villa, detached house, or farmhouse,' 'Apartment,' or 'Townhouse, terraced, or semi-detached house,' and whether the respondent resides in one of Denmark's four largest cities—Copenhagen, Aarhus, Odense, or Aalborg. These variables are likely causes of both homeownership and nimbyism, and they may confound the findings. In the sample, the two groups also differed markedly on these variables: homeowners were older, had higher household incomes, were more likely to live in single-family homes rather than apartments, and were more likely to reside outside the larger cities compared to non-homeowners.

We followed an iterative process in line with the recommendations of Ho et al. (2007) to develop an optimal matching procedure. Throughout this process, we explored various matching methods to achieve balance on the selected covariates while preserving as much statistical power as possible. Initially, we implemented 1:1 nearest neighbor propensity score matching, estimated using logistic regression of the treatment on the covariates. However, this specification yielded poor balance, particularly regarding the respondent's housing type. To address this issue, we attempted exact matching on the categorical covariates while applying propensity score matching to age, but this approach did not achieve balance on respondents' age. We then tried optimal full matching, but due to the large sample size, this method failed to converge. As a result, we opted for generalized full matching (Sävje, Higgins, and Sekhon 2021).

As reported in Figure K1, this matching procedure achieves a satisfactory balance on the covariates. In all cases, the standardized mean difference between homeowners and non-homeowners falls below 0.1, which can be considered a negligible difference. Furthermore, only in one instance – living in one of the large cities – does the Kolmogorov–Smirnov statistic fail to reach statistical significance ($p = 0.054$), suggesting that we cannot reject the null hypothesis that the distribution is drawn from the same reference distribution. Consequently, we opted for generalized full matching. This approach is similar to full matching in that it does not discard any units, ensuring that all subgroups contain one unit from each treatment condition. After matching, the effective sample of homeowners was reduced to 1,162. Naturally, this

procedure significantly lowers the statistical power of our tests, it markedly reduces bias in the estimates.

**Figure K1:** Balance on covariates between homeowners and non-owners before and after matching




*Note:* Generalized full matching with propensity scores estimated with logistic regression. *: or similar type of housing (Villa: Detached house or farmhouse. Terraced house: Townhouse or semi-detached house).

## *L Nimbyism Among Homeowners Conditional on Exposure to Price Shocks*

The home value explanation can also be tested by comparing homeowners who are more or less exposed to price shocks. Homeowners who are more exposed to price shocks should also be more concerned about housing market fluctuations (Fischel 2005). Thus, they should be more likely to try to prevent local development from occurring, since they fear the economic consequences more.

We conceptualize exposure to price shocks in two different ways. First, we look at whether respondents live in relatively expensive housing and thus are more exposed to changes in home values. To do so we compare homeowners living in relatively expensive and inexpensive housing. We consider homeowners to be living in expensive housing if their response to the question "If your house went on the market tomorrow, what would it be worth, approximately?" is above the median response in their municipality, and in less expensive housing if their response is at or below the median response in their municipality.

Second, we look at whether respondents have a high home value-to-income ratio (HVIR), which captures how exposed respondents are to fluctuations in the housing market given their income level. We consider homeowners to have a high HVIR if they have an above median HVIR, and a low HVIR if they have an at or below median HVIR. HVIRs are calculated based on self-reported home values "If your home went on sale tomorrow, how much would it be worth approximately?" and self-reported pre-tax household income "What is your household's annual gross income (before tax)?".

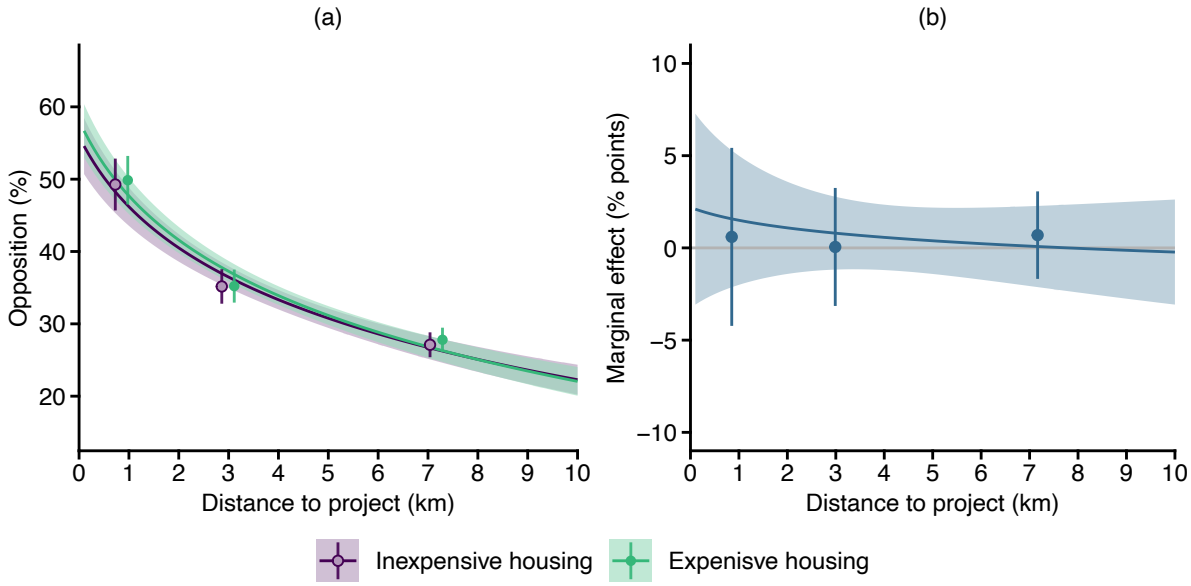
We also preregistered third operationalization of exposure to price shocks, that would test if homeowners with high or low home equity would respond differently. Our analysis was going to be based on home equity data from Statistics Denmark. However, as we would not be able to share these data for replication and as we are including analyses based on alternative operationalizations, we do not believe the results would justify the cost of acquiring these data. Therefore, we did not conduct this analysis.

The results of these tests are shown in figure L1 and figure L2. Living in a relatively expensive home does not seem to affect nimbyism. Opposition to new development is remarkably similar for homeowners living in relatively inexpensive and relatively expensive housing. In contrast, having a high HVIR does seem to affect nimbyism, as respondents with a high HVIR are 6.8 percentage points more likely to oppose a project within the nearest 2 km compared to respondents with a low HVIR (95% CI: 2.0-13.6). While this is a notable difference, it should be noted that HVIR could be picking up on the respondents' local preservationism. Thus, the willingness to spend a high proportion of one's income to live in a particular area could be seen as a sign that one has quite strong preferences for living there, which might in part reflect a strong preference for the built environment in this area. Consistent with this, we find that respondents with a high HVIR report higher scores on our local preservationism index.

### *M Additional Analyses from the Preregistration*

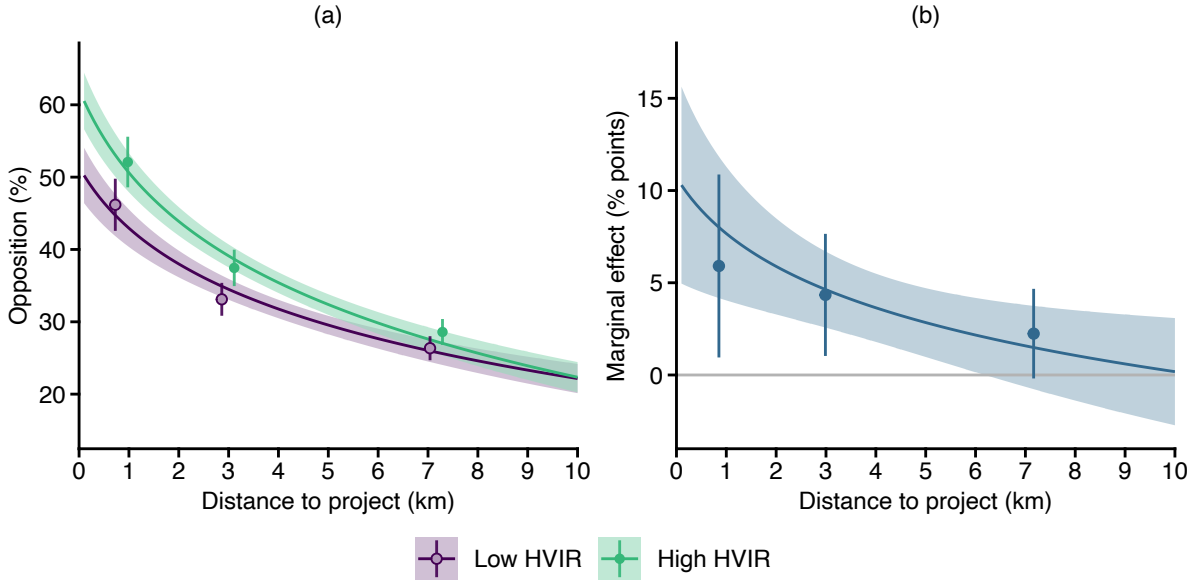
We report most preregistered analyses in the manuscript and appendices, but include a few additional preregistered tests here for transparency (Humphreys, Sanchez de la Sierra, and Windt 2013). In particular, we examine whether project size or the presence of a map affected nimbyism.

**Figure L1:** Does owning a relatively expensive home condition the extent of nimbyism among homeowners?




Note: Error bars and the shaded area represent 95 % confidence intervals. Homeowners live in expensive housing if their response to the question "If your home went on sale tomorrow, how much would it be worth approximately?" is above the median response within their municipality, and in inexpensive expensive housing if they answer at or below the median within their municipality. N = 15,487.

**Figure L2:** Does having a large home value-to-income ratio condition the extent of nimbyism among homeowners?




Note: Error bars and the shaded area represent 95 % confidence intervals. Homeowners have a high home value-to-income ratio (HVIR) if it is above the median, and a low HVIR if it is at or below the median. HVIR is calculated based on self-reported home values "If your home went on sale tomorrow, how much would it be worth approximately?" and self-reported household income pretax "What is your household's annual gross income (before tax)?". N = 14,852.

Table M1 shows the impact of project size. Opposition is significantly greater for taller buildings but not for those with larger footprints, suggesting height matters more than overall size. Columns two and three test whether project size conditions nimbyism; we find no evidence of this.[2]

Table M2 tests whether providing a map affects opposition and nimbyism. Opposition is about four percentage points higher with a map, but we find no interaction with distance, suggesting maps do not alter nimbyism.

### *N Ethical Considerations*

The study was approved by the Institutional Review Board at [redacted for review](Approval number: redacted for review].

**Consent.** Respondents were briefed on the study's purpose (local politics), random assignment of projects, voluntary participation, withdrawal rights, and survey length (10 minutes). They provided informed consent before starting. After completing the survey, we debriefed them, clarified that projects were fictional, disclosed funding sources, and reiterated their right to withdraw.

**Deception.** None was used. Projects were described as hypothetical, and we explicitly stated in the debriefing that no real plans existed.

**Confidentiality.** Data handling follows GDPR and Danish law. An anonymized dataset and code will be shared on the JOP Dataverse. Data linking survey responses with Danish registers will not be shared to protect anonymity.

**Harm.** We see no risk of mental or social harm to participants.

**Impact.** Findings may inform local politicians about public opinion, with potential implications for housing development.

**Compensation.** Participation was incentivized by a lottery of 10 vouchers worth 1,000 DKK each.

2. The "size" index is constructed by multiplying our two size indicators, then contrasting the smallest 25% of projects with the largest 25%.

**Table M1:** Preregistered test of H2a and H2b

| Model: | Simple | Height | Largeness |
|---|---|---|---|
| Constant | 0.38** | 0.37** | 0.56** |
| | (0.009) | (0.01) | (0.01) |
| [0-2] km | ref | ref | ref |
| ]2-6] km | -0.14** | -0.14** | -0.13** |
| | (0.008) | (0.01) | (0.01) |
| ]6-10] km | -0.18** | -0.20** | -0.17** |
| | (0.008) | (0.02) | (0.01) |
| one story | ref | ref | |
| three stories | 0.05** | 0.07** | |
| | (0.008) | (0.02) | |
| five stories | 0.12** | 0.13** | |
| | (0.008) | (0.02) | |
| seven stories | 0.18** | 0.20** | |
| | (0.008) | (0.02) | |
| 500 sqm | ref | | |
| 1,000 sqm | 0.006 | | |
| | (0.007) | | |
| 10,000 sqm | 0.009 | | |
| | (0.007) | | |
| “small” | | | ref |
| “large” | | | -0.15** |
| | | | (0.01) |
| one story × ]2-6] km | | 0.01 | |
| | | (0.02) | |
| three story × ]2-6] km | | -0.003 | |
| | | (0.02) | |
| seven story × ]2-6] km | | -0.01 | |
| | | (0.02) | |
| one story × ]6-10] km | | 0.03 | |
| | | (0.02) | |
| three story × ]6-10] km | | 0.008 | |
| | | (0.02) | |
| seven story × ]6-10] km | | 0.03 | |
| | | (0.02) | |
| “large” × ]3-6] km | | | -0.02 |
| | | | (0.02) |
| “large” × ]6-10] km | | | -0.03 |
| | | | (0.02) |
| R2 | 0.042 | 0.042 | 0.038 |
| RMSE | 0.467 | 0.466 | 0.465 |
| Observations | 26,002 | 26,002 | 17,481 |

*Note:* The dependent variable is opposition to the development project. †p < .10; *p < .05; **p < .01.

**Table M2:** Preregistered test of H2c and H2d

| Model: | Simple | Interaction |
|---|---|---|
| Constant | 0.48** | 0.48** |
| | (0.006) | (0.006) |
| Map available | -0.04** | -0.03 |
| | (0.009) | (0.02) |
| [0-2] km | ref | ref |
| ]2-6] km | -0.14** | -0.13** |
| | (0.008) | (0.02) |
| [6-10] km | -0.18** | -0.19** |
| | (0.008) | (0.02) |
| Map available x ]6-10] km | | -0.007 |
| | | (0.03) |
| Map available x ]2-6] km | | 0.01 (0.03) |
| R2 | 0.021 | 0.021 |
| RMSE | 0.471 | 0.471 |
| Observations | 26,002 | 26,002 |

*Note:* The dependent variable is opposition to the development project. †p $<$ .10; *p $<$ .05; **p $<$ .01.

*Preregistration*

**Description:** This study reconsiders the place-dependency of residents' motivations to block local development projects, such as new housing or renewable energy. First, the study tests the prevalence of NIMBYism by examining how characteristics of potential development projects are related to residents' opposition and the distance of the project from their homes. In a large-scale survey experiment we thus randomly vary (1) the type of the project, (2) the size of the project, (3) the height of the project, (4) the availability of information about the distance between the resident's home and the project, (5) the availability of a map of the project's location, and (6) the distance between the respondent's home and the project. Second, the study tests key explanations for nimbyism such as homeownership or, as proposed here, localism.

**Registration type:** OSF Preregistration

**Date registered:** June 20, 2023

**Date created:** June 20, 2023

## Study Information

**Hypotheses:**

H0: (null hypothesis) Increasing the distance between residents' homes and potential development projects does not affect residents' opposition to the project.

H1: Increasing the distance between residents' homes and potential development projects reduces residents' opposition to the project.

H2a: Opposition to potential development projects will be higher for larger and more intrusive projects.

H2b: These differences will be smaller for residents very close to and very far from the project.

H2c: Opposition to potential development projects will be higher if respondents know the exact location of the project.

H2d: These differences will be smaller for residents very close to and very far from the project.

H3a: Increasing the distance between residents' homes and potential development projects reduces residents' opposition to these projects for homeowners, but not for renters.

H3b: Increasing the distance between residents' homes and potential development projects reduces residents' opposition to the project more for homeowners who are the most economically exposed to price shocks.

H4a: Increasing the distance between residents' homes and potential development projects reduces residents' opposition to the project more for residents who have strong preferences over how their local area looks and feels.

H4b: Increasing the distance between residents' homes and potential development projects reduces residents' opposition to the project more for residents who identify strongly with their local area.

H4c: Increasing the distance between residents' homes and potential development projects reduces residents' opposition to the project more for residents who live in their ideal community than for residents who would prefer to live elsewhere.

## Design Plan

**Study type:** Experiment - A researcher randomly assigns treatments to study subjects, this includes field or lab experiments. This is also known as an intervention experiment and includes randomized controlled trials.

**Blinding** For studies that involve human subjects, they will not know the treatment group to which they have been assigned.

**Is there any additional blinding in this study?** No

**Study design** We field an online questionnaire with the survey company Epinion. The respondents are selected by Statistics Denmark using stratified random sampling from the Danish registers. See "Data collection procedure" for details.

In the survey, the respondents are presented with a potential development project in their local municipality. The attributes of the potential development projects are randomized across respondents. This experimental component allows us to test how people respond to different attributes of development projects. In particular how it affects respondents' opposition to the project.

- *No files selected*

**Randomization** The description of the development projects includes six attributes that are randomized across respondents: (1) the type of the project, (2) the size of the project, (3) the height of the project, (4) information about the distance between the respondent's home and the project, (5) the availability of a map of the project's location, and (6) the distance between the respondent's home and the project.

(1) Project type is assigned based on simple random assignment with a uniform distribution across the nine attribute levels. That is, there is a 1/9 chance that the project is one of the following types: 1. social housing, 2. private housing, 3. rental housing, 4. a public institution, 5. offices, 6. factory premises, 7. a biogas plant, 8. a sewage plant, or 9. retail premises.

(2) Project size in square meters is assigned based on simple random assignment with a uniform distribution across the 3 attribute levels. That is, there is a 1/3 chance that the project is one of the following sizes: 500, 1000, or 10000 square meters.

(3) Project height is assigned based on simple random assignment with a uniform distribution across the four attribute levels. That is, there is a 1/4 chance that the project will have one of the following heights: one story, three stories, five stories, or seven stories.

(4) The availability of information about the distance between the respondent's home and the development project (6) is assigned based on simple random assignment with an equal distribution between those who receive the information and those who do not.

(5) The availability of a map showing the location of the project is assigned based on random assignment with unequal distribution. That is, there is a 4/5 chance of getting a map and a 1/5 chance of not getting a map.

For respondents assigned to the map, we generate a personalized map based on information about the coordinates of the respondent's address drawn from the Danish registries, the randomly drawn distance between the respondent's home and the project (6), and a modified shapefile of the municipality where the respondent's home is located. This allows us to randomly generate the coordinates of the potential development project at a specific distance from their home and within their municipality. We have modified the shapefile to ensure that the project is not located on uninhabited sandbanks, lakes, or similar features of the Danish landscape that would detract from the realism of the treatment. To generate the coordinates of the

potential development project, we create a polygon of the intersection between the municipality shapefile and an annulus centered on the respondent's home, with an outer radius equal to the attributed distance (6) and an inner radius of 1 km less than that distance. We then select a random point within this polygon as the location of the project.

There may be no available points within the polygon if the annulus and the municipality shapefile do not intersect. This can happen if the respondent lives on an island or in a small municipality. For these respondents, we then draw a new distance (see (6) below), but exclude distances that are equal to or greater than the initial distance assigned to them. We then repeat the process of generating the coordinates of the project location by intersecting the new smaller annulus with the municipality polygon. This approach results in a somewhat uneven distribution of distances among respondents, with more respondents who receive a map with shorter distances. In additional tests, we examine the sensitivity of the results to this assignment.

(6) The distance between the respondent's home and the project is attributed based on a simple random assignment of the integers between 1 and 10. However, note the amendments to this simple procedure due to the realism of the maps. The text telling the respondent about the distance between the respondent's home and the project (4) and the map showing the location of the project (5) needs to be internally consistent. These two treatments thus rely on this shared measure of the distance between the respondent's house and the construction project. Respondents will be informed about the distance through the text (4) or indirectly through the map (5), and respondents who do not receive either type of information will not be given any information about the distance.

## Sampling Plan

**Existing Data** Registration prior to accessing the data

**Explanation of existing data** The preregistration was finalized as the data was being collected by Epinion. The researchers in the project did not access the data prior to submission of the pre-registration.

**Data collection procedures** Statistics Denmark drew the raw random sample of the target population from the Danish Population Registry (CPR). The target population of the project

is all Danish citizens who have a permanent address in Denmark and are at least 19 years old. The project aims to collect at least 1,000 respondents from Copenhagen Municipality, 500 respondents from Aarhus Municipality, and 200 respondents each from the remaining 96 municipalities in Denmark. The sampling of the raw sample is therefore based on stratified random sampling at the municipal level, with 5,000 potential respondents from Copenhagen, 2,500 from Aarhus, and 1,000 from each of the remaining municipalities.

Epinion will be responsible for data collection in the project. By relying on a multi-stage survey design Epinion seeks to ensure the representativeness of the final sample. All respondents will first be contacted via digital postage (e-boks, required by law in Denmark) and will receive a unique web link to the survey. After one week, respondents who have not yet completed the survey will receive the first reminder in their e-boks. After another week, respondents who have not completed the survey will receive the second reminder in their e-boks. In the two weeks following the second reminder, Epinion will conduct telephone reminders. Epinion will target the reminder calls to sub-populations within each municipality based on the distribution of gender and age. Municipalities will also be prioritized to ensure that the final number of respondents within each municipality is reached.

Respondents will be incentivized to participate in the study through a lottery of 10 vouchers worth 1,000 DKK (approx. 135 EUR) each.

- *No files selected*

**Sample size** The raw sample consists of about n=103,500 Danish citizens aged 18+ (by November 1, 2021) with a permanent address in Denmark. 5,000 from Copenhagen Municipality, 2,500 from Aarhus Municipality, and 1,000 from each of the remaining 96 municipalities.

Epinion has estimated that it is possible to achieve a response rate in the range of 25-30 %. However, the size of the sample is based on a conservative estimate of a response rate of 20 %. This also takes into account that 5 % will have a secret address or will be exempt from digital postage. The final sample is thus estimated to consist of about 20.700 responses, with 1.000 responses from Copenhagen, 500, from Aarhus, and at least 200 from each of the remaining 96 municipalities.

**Sample size rationale** The sample size is based on a power analysis indicating that a sample size of 20000 will allow us to detect small to modest interaction effect sizes with 80 % power. In addition, it should allow us to detect modest direct effects of the distance with 80 % power for each municipality.

We recognize that this is a large number of respondents, but because we want to show how attitudes vary across municipalities and across covariates, we need a sufficient number of respondents.

**Stopping rule** Data collection is ended after the final reminders have been conducted by Epinion.

## Variables

**Manipulated variables** We manipulate six attributes of the potential development projects: (1) the type of the project, (2) the size of the project, (3) the height of the project, (4) information about the distance between the respondent's home and the project, (5) the availability of a map of the project's location, and (6) the distance between the respondent's home and the project.

See attached file for an example of treatment:

- Treatment example.pdf

**Measured variables** Opposition to the proposed development project:

The outcome variable used across hypotheses is the respondents' opposition to the proposed development project. We measured opposition on a seven-point Likert scale on the question: "Do you support or oppose the proposed construction project?" with the response options: 1) I definitely oppose the construction project, 2) I oppose the construction project, 3) I am somewhat opposed to the construction project, 4) I neither support nor oppose the construction project, 5) I somewhat support the construction project, 6) I support the construction project, 7) I definitely support for the construction project, and 8) Don't know.

Information about the development project:

The respondents are provided with the following information about the development project.

- "The municipal council is considering whether to allow construction of [insert (1)] on a plot of land in the municipality.

It will be a development project of [insert (2)] square meters in floor plan and approximately [insert (3)].

[if (4) = ”1” insert ”The development project will be located approximately [insert (6)] km from your home.”] [if (5) = ”1” insert ”On the map below, the area where the development project will be located is marked in red.” [insert appropriate map.png (See map_demo.png for example).]]”

The type of the project (1): (no hypotheses about differences)

- 1. social housing (almene boliger),
- 2. private housing (ejerboliger),
- 3. rental housing (lejeboliger),
- 4. a public institution (en offentlig institution),
- 5. offices (kontorer),
- 6. factory premises (fabrikslokaler),
- 7. a biogas plant (et biogasanlæg),
- 8. a sewage plant (et rensningsanlæg)
- 9. retail premises (butikslokaler).

The size of the project (2): (included as dummies, used to test hypotheses H2a-b).

- 1. 500
- 2. 1.000
- 3. 10.000

The height of the project (3): (included as dummy variables, used to test hypotheses H2a-b)

- 1. one story (i ét plan),
- 2. three stories (på tre etager),
- 3. five stories (på fem etager),
- 4. seven stories (på syv etager).

Information about the distance between the respondent’s home and the project (4):

- 0. information not available,
- 1. information available.

Availability of a map of the project’s location (5): (included as dummy variable, used to test Hypotheses 2c-d)

- 0. map not available,
- 1. map available.

The distance between the respondent's home and the project (6):
The distance is measured as the geodetic distance between the coordinates of the respondents' addresses (obtained by geocoding the addresses via Danmarks Adressers Web API, DAWA) and the randomly generated coordinates of the potential construction project. The distance is logarithmically transformed in the main specification. This is done following the argument of Gravelle, Medeiros, and Nai (2021). Supplemental analyses will rely on alternative operationalization of the distance between the respondent's home and the development project. This will include the untransformed distance, a categorical classification of the distances, and the respondent's subjective assessment of the travel time to the project.
Homeownership (used to test H3a):

We consider respondents to be homeowners if they answered "Owner-occupied housing" or "Owner-occupied cooperative housing" to the question "What best describes your housing situation?", and non-homeowners otherwise.
Home equity (used to test H3a):
Here, we rely on information from the Danish registries on the home equity of the respondent's homes. This only makes sense for homeowners, so the information will not be available for non-homeowners. Since we will be able to link the respondent's answers to the registries, we will follow the standard procedure developed by Statistics Denmark to determine the respondent's home equity. If the respondent's home equity is above the median home equity within their municipality, we consider them to have a high home equity, and we consider the respondent to have low home equity if it is at or below the median within their municipality.
Living in expensive housing (used to test H3b): We consider homeowners to be living in expensive housing if their response to the question "If your home went on sale tomorrow, how much would it be worth approximately?" is above the median response within their municipality, and in less expensive housing if they answer at or below the median within their municipality. We will also use a measure that looks at the housing price to income ratio for each individual re-

spondent.

Localism (used to test H4a): See Indicies.

Local identity (used to test H4b): See Indices.

Preferred municipality to live in (used to test H4c): We consider respondents to be living in their preferred municipality if they answer the question ”If you could choose, which municipality would you prefer to live in?” with the municipality they currently live in, and not in their preferred municipality if they answer any other municipality.

All items in the survey can be found in their Danish wording in the attached file ”survey.pdf”.

- map_demo.png
- survey.pdf

**Indices** Localism:

The respondent’s level of localism is assessed using eight items scored on a five-point Likert scale ranging from ”Disagree” to ”Agree”. The eight items are combined into an index based on the simple sum of the scores across the eight items. We will do a reliability analysis and omit items that lower the overall scale reliability. Missing responses are recorded as the mean of the item. We consider respondents to have a high level of localism if they score at or above the median on the index, while we consider respondents to have a low level of localism if they score below the median on the index. The wording of the eight items translated into English is as follows:

- (_1) I don’t think too much about what my local area looks like. (inverted)
- (_2) I don’t have strong feelings about how my local area looks. (inverted)
- (_3) My local area is truly unique.
- (_4) I’m happy with the way my local area looks.
- (_5) I want my local area to change. (inverted)
- (_6) I want my local area to retain its special character.
- (_7) I mainly live where I do for practical reasons. (inverted)
- (_8) I can’t imagine living anywhere other than where I do now.

The eight items can be found in their Danish wording in ”survey.pdf”.

Local identity:

The respondents' identification with their local area is assessed by four items, which are scored on a seven-point Likert scale ranging from ”not at all” to ”to a very high degree”. We will do a reliability analysis and omit items that lower the overall scale reliability. The four items are combined into an index based on the simple sum of the scores across the four items. Missing responses are recorded as the mean of the item. We consider respondents to identify strongly with their local area if they score at or above the median on the index, while we consider respondents to identify weakly with their local area if they score below the median on the index. The wording of the four items translated into English is as follows:

- (_1) To what extent do you feel close to your local area?
- (_2) To what extent do you use the term ”we” instead of ”they” when referring to people from your local area?
- (_3) To what extent do you see yourself as typical for your local area?
- (_4) To what extent do you identify with your local area?

The four items can be found in their Danish wording in ”survey.pdf”.

- *No files selected*

## Analysis Plan

**Statistical models** To test the hypotheses, we rely on standard methods of statistical inference in the field (such as OLS with robust standard errors). Below we describe how we will test our different hypotheses:

To test H0-H1, we compare opposition to the development projects across different distances between the respondent's address and the development project. Since distance information is provided through a line of text and the map (both of which are randomized), the place-dependency in the respondent's opposition should depend on the availability of either. We, therefore, regress the log of the distance between the project and the respondent's home (beta1), a dummy for the availability of the information (beta2), and an interaction between the log of the distance and the availability of the information (beta3) on the respondent's opposition to the project.

According to H0, none of these coefficients should be substantially large or statistically significant, since respondents' opposition to the development projects should be unrelated to the distance between the respondent's home and the project.

According to H1, beta3 should be negative, substantially large, and statistically significant. This coefficient captures the effect of the distance between the project and the respondent's home for respondents who have access to information about the distance. Thus, larger distances between the project and the respondent's home should, according to the hypothesis, reduce the respondent's opposition. Only respondents who are given information about the distance should react in this way. We, therefore, expect beta1 to be substantially small and statistically insignificant.

To test the remaining hypotheses we focus on the subsample that received the line of text with information about the distance between their home and the development project, the map with the location of the development project, or both. Thus, we exclude respondents who were not informed about the distance between their homes and the development project.

To test H2a-d we proceed sequentially and test each hypothesis in isolation.

To test H2a, we include the two indicators of project size (area and height) as dummy variables. We expect opposition to be strictly increasing in both indicators of project size.

To test H2b, we create an index of "largeness" by multiplying our two size indicators. We then create a dummy variable for whether the projects are among the 25 percent largest or 25 percent smallest projects. We interact this dummy with a set of dummies indicating the tercile distance between the respondent's home and the project in three groups: short distance (first tercile) medium distance (second tercile) and long distance (third decile). We expect the interaction effect to be largest at the medium distances, and smaller for either the long distance, the short distance, or both.

To test H2c, we include a dummy for whether respondents saw a map, and we expect opposition to be higher for respondents who saw the map.

To test H2d, we interact the map dummy with our tercile of distances (see H2b). We expect the interaction effect to be largest for the medium distances and smaller for either the long distance, the short distance, or both.

To test H3a-c, we proceed sequentially, testing each hypothesis in isolation. In each case, we regress the log of the distance between the project and the respondent's home (beta1), a dummy variable indicating self-interest (beta2), and an interaction between the log of the distance and the self-interest indicator (beta3) on the respondent's opposition to the project.

To test H3a, we examine whether renters (non-homeowners) have place-dependent attitudes. H3a finds support if beta1 is around zero and statistically insignificant, as this would indicate that renters do not have place-dependent attitudes.

To test H3b, we rely only on responses from homeowners, using two different indicators of how exposed the homeowner is to price shocks. The first is the price of the respondent's home relative to their income. The second is the amount of equity in the home. For both indicators, we do a within-community median split to see whether respondents live in a relatively more or less expensive home and have relatively more or less home equity. If H3b is correct, we expect people with more home equity and more expensive homes to be more opposed to nearby projects. We, therefore, expect a statistically significant, negative, and substantially large interaction.

To test H4a-c, we proceed sequentially, testing each hypothesis in isolation. Each hypothesis tests a different implication of the localism hypothesis in relation to NIMBYism. In each case, we regress the log of the distance between the project and the respondent's home (beta1), a dummy variable indicating attachment to the local area (beta2), and an interaction between the log of the distance and the attachment indicator (beta3) on the respondent's opposition to the project.

To test H4a, we examine whether residents with high levels of localism (ref=low levels of localism) have more place-dependent attitudes than residents with low levels of localism. H4a finds support if beta3 is negative, substantially large, and statistically significant, as this would indicate that opposition to the development project is more place-dependent among residents with higher levels of localism.

To test H4b, we examine whether residents who strongly identify with their local area (ref=weakly identify with the local area) have more place-dependent attitudes than residents who weakly identify with the local area. H4b finds support if beta3 is negative, substantially

large, and statistically significant, as this would indicate that opposition to the development project is more place-dependent among residents who strongly identify with their local area.

To test H4c we examine whether residents who live in their ideal municipality (ref= do not live in their ideal municipality) have more place-dependent attitudes than residents who do not live in their ideal municipality. H4c finds support if beta3 is negative, substantially large, and statistically significant, as this would indicate that opposition to the development project is more place-dependent among residents who live in their ideal municipality.

- *No files selected*

**Transformations** Se ”Measured Variables” for details on variable transformations.

**Inference criteria** We will use the standard p¡.05 criteria for determining if the estimates suggest that the results are significantly different from those expected if the null hypothesis were correct.

**Data exclusion** We exclude respondents who answered ”Don’t know” to the question about their opposition to the proposed development project. We also exclude respondents who have moved from their registered address since the sample was initially drawn by Statistics Denmark.

In addition, some analyses are based only on respondents who were informed in some way about the distance between the development project and their home, and only on respondents who are homeowners. See ”Statistical models” for details.

**Missing data** Listwise deletion.

**Exploratory analysis** We will rely on the text responses to the open-ended question ”You said that [respondent’s attitude toward the project]. Can you briefly elaborate on why?” to explore possible explanations for the respondent’s attitudes toward development projects.

## Other

**Other** References: Gravelle, Timothy B., Mike Medeiros, and Alessandro Nai. 2021. “In the Shadow of the Tower: Spatial Proximity to Mosques, Visible Diversity, and Support for the Radical Right.” Political Geography 91: 102499.